

ĺ 

.

## ON THE PROPERTIES OF DISTRIBUTIONS

OF TEST SCORES

Antony F. Holmes

Thesis submitted in partial fulfilment of the requirements for the Degree of Master of Arts.

> McGill University Montreal 1949

# CONTENTS

<u>Chapter</u>		Page
I	Statement of the Problem and the Methodology	1
II	Historical Background (Summarized)	5
III	Test Discrimination (Detailed) and Item Selection (Summarized)	7
IV	Empirical Data: Original Part (Summarized); Final Part (Detailed)	10
۲	Summary and Conclusions	20

# Bibliography

## Appendices

A	Historical Background (Detailed)	27
в	Item Selection (Detailed)	33
C	Empirical Data: Original Part (Detailed)	41
D	Original Tests: Forms 1 to 10 inclusive	
E	Final Tests: Forms A, B and C	

•

25

## PREFACE

My thanks are extended to the Defence Research Board for their kind co-operation in arranging for the administration of my empirical tests to non-commissioned personnel of the Royal Canadian Air Force.

#### Chapter I

#### Statement of the Problem and the Methodology

### Statement of the Problem

Since the beginning of mental testing, the concept of the normal distribution of human intelligence has influenced the theory of test construction to a great extent. This is understandable if intelligence itself is regarded in the light of the knowledge concerning other human properties, for there is then some justification to support the belief that it may be normally distributed in human beings. Unfortunately, however, the basic result of this concept in the field of mental test construction has been to effect the construction of tests which, owing to the properties of the normal curve, did not discriminate to the maximum possible extent amongst testees.

Although the theory of test construction has been under consideration since the time of Binet's original work in this field, during the past ten years or so a considerable amount of specialized work has been done on this subject. The concepts of discriminatory capacity and internal consistency of a test have emerged and have brought about a gradual change in the theory of mental test construction. The purpose of this work is to examine in an empirical manner, as accurately as possible, some of the newly-deduced theoretical assumptions in these same concepts.

Page 2.

The title of the problem has already been briefly given as "<u>On the Properties of Distributions of Test Scores</u>". Upon elaboration, it is found that the problem is essentially concerned with the relationships between certain properties of the items of a test, i.e. difficulty value and discriminatory capacity, and the discriminatory capacity of the test as a whole. The variable properties of the test items will also require appropriate definition and, in this instance, the items will be of the dichotomous type, i.e. they will either be passed or failed by the testees.

As will be demonstrated later in Chapter III, the discriminatory capacity of any test may be defined in terms of the proportion of possible relations of difference, which the test effects between testees. It is also evident that such relations of difference between testees may only be effected through differences in total test scores. If, however, the individual test items are not themselves discriminating between testees, then the obtained differences in total test scores would be simply due to random answers. In this case, the test results would be completely meaningless as far as the ability being tested was concerned. In the problem, therefore, the attempt will be made to keep the discriminatory capacities of the individual items at a maximum level, through pretesting, and then, by varying the difficulty values of the items, to obtain the required distributions of test scores. As Ferguson has already observed (9, 1941), a test so constructed that its items possessed the same difficulty value, .5, and discriminated perfectly, would succeed in dividing the testees into two equal groups, of which one made zero scores and the other made perfect scores. Similarly, a test so constructed that its K items ranged in difficulty value from 1.0 to 1/K+1 by equal steps and discriminated perfectly, would divide the testees into K+1 equal groups on the basis of total test scores.

The two theoretical test distributions detailed above, and many others not mentioned, remain only theoretically obtainable. Since empirical data is being dealt with, the restriction to less extreme types of distributions will be necessary. Essentially, therefore, the attempt will be made to construct tests, which will divide the testees into two groups and, at the same time, will discriminate within one of these groups, all on the basis of total test scores.

#### The Methodology

Now that the problem under consideration has been expanded somewhat, the required methodology becomes apparent. Firstly, the theoretical relationships involved will be studied and certain deductions will be made on the basis of logical arguments. Secondly, these deductions will be tested empirically as accurately as possible. Thirdly, the empirical results obtained will be studied in the light of these deductions and then evaluated to ascertain whether they substantiate these same deductions.

#### Chapter II

## Historical Background (Summarized)

The application of the concept of normal distribution, developed by Quetelet, to the study of human mental ability may be traced through its original use by Sir Francis Galton (7, 1869) and its general reinforcement by Karl Pearson (14, 1920-27), to its influence on Binet, culiminating in his idea of Mental Age (1, 1913). The later Stanford revisions of Binet's original tests embodied W. Stern's concept of the Intelligence Quotient (I.Q.), which proved so popular that mental tests were only constructed to measure I.Q.'s and the idea of differentiating between individuals at somewhat the same level was, to a large extent, ignored. Thorndike (16, 1926), although he recognized a potential fallacy, suggesting as he did that the intelligence curve for adult males may be positively skewed, made no attempt to demonstrate this empirically.

Recently, considerable attention has been paid to the theory of test construction. John A. Long and others (12, 1935) investigated the question of validation of test items, while Jackson and Ferguson (9, 1941) studied carefully test reliability. This particular aspect was considered at length by Ferguson (2, 1941), and he also examined the possibility of choosing test items by the "constant process" (3, 1942). Finney (6, 1944) likened the latter method to Probit Analysis in use in the field of toxilogical research. Later, Ferguson summed up the general problems in test construction (4, 1945), and he has recently crystallized his ideas on the rectangular distribution of test scores (5, 1949).

The preceding brief summary is elaborated in Appendix A.

## Chapter III

## Test Discrimination and Item Selection (Summarized)

## Test Discrimination (Detailed)

In his present paper in publication (5, 1949), Ferguson argues briefly that, given a population of N individuals taking any one test, it is theoretically possible to make  $\frac{N(N-1)}{2}$  comparisons between them on the basis of total test scores. This number of comparisons is, of course, governed by the number of testees. Secondly, he postulates that these  $\frac{N(N-1)}{2}$  comparisons may be divided into two groups: relations

of equivalence and relations of difference. Therefore, since the total number of comparisons is fixed, any test distribution, which has the effect of decreasing the number of relations of equivalence, must, at the same time, increase the number of relations of difference. Also, the greater the number of relations of difference, the greater the discriminatory capacity of the test in question since each such relation indicates that one testee is either superior to or inferior to another individual taking the same test, on the basis of total test scores. Finally, Ferguson is able to prove conclusively that a rectangular distribution of test scores gives a minimum number of relations of equivalence and must, therefore, also give a maximum number of relations of difference. This, in turn, means that such a test, as a whole, has the greatest possible discriminatory capacity.

#### Item Selection (Summarized)

Item selection comprised obvious difficulties because the difficulty value of an item, indicating as it does the proportion of testees who pass the item in question, is no measure whatsoever of its discriminatory capacity. It was necessary, therefore, to use some statistic to correlate individual item responses with total test scores and, while biserial r might have been used for this purpose, its calculation would have been very laborious. Instead, Whitfield's modification (17, 1947) of Kendall's new coefficient of rank correlation (10, 1938) was used and proved eminently suitable.

It was also decided that it would not be feasible, for special reasons, to attempt the construction of Ferguson's perfect discriminatory test (2, 1941) as our tests were intended for administration to applicants for entry into the Canadian Armed Forces. Instead, the alternative plan of using "dummy" items at the beginning of tests was suggested. However, when the discriminatory capacity indices for the items of the original ten tests had been computed, it was found that there were not enough items with high enough indices to carry out this new plan. The empirical approach was then further modified in line with Ferguson's theory (2, 1941), and three final tests were constructed.

A detailed consideration of item selection and test construction will be found in Appendix B.

## Chapter IV

## Empirical Data: Original Part (Summarized); Final Part (Detailed)

The original empirical may be summarized as follows:

- (a) In all 1,050 test items were prepared. Through careful scrutiny, these items were reduced to 750 and ten tests were constructed, each containing 75 comparable items selected at random. Each test contained five similar items, Nos. 30, 40, 50, 60 and 70.
- (b) The duplimats for the first two pages of the original test, which were similar for all ten forms, and for all the items of Form 1 were typed at McGill. The balance were prepared at Ottawa, where the tests were also run off and made up.
- (c) The Defence Research Board forwarded 299 copies of these tests, 30 of each form except No. 6, to No. 2 Manning Depot of the Royal Canadian Air Force at Trenton, Ontario. These tests were randomly administered to non-commissioned personnel, both recruits and reenlistments, with a 35 minute time limit.
- (d) Upon return of the completed tests and before scoring, 13 copies were discarded either because they had been administered to French-speaking personnel or because they had been wrongly assembled at Ottawa. Also, a total of 35 items were eliminated, mainly because they turned out to be ambigious.

- (e) The percentage means (since the number of items in each test were no longer comparable), the coefficients of variation and the difficulty values of the five special items were then calculated for each of the ten forms of the original test. On the basis of the obtained values, it was decided that the ten sub-samples involved were statistically comparable.
- (f) The discriminatory capacity indices of all items, which appeared visually promising, were evaluated using the special modification of Kendall's new statistic (17, 1947). (A detailed account of this section of the empirical investigation will be found in Appendix C.)

Upon scrutiny of the completed indices, it was found that there were not sufficient items with high enough indices to carry out the original theoretical plan. The latter was amended in the following manner. Three new forms of the test, Forms A, B and C were constructed. Each test contained the same five "dummy" items, possessing a difficulty value of about .90 and the highest discriminatory capacity available. These initial items were intended as a general encouragement for all testees. In addition, fifty specially selected items, Nos. 6 to 55 inclusive, were added to each test and the composition of these items is shown in Table 1.

#### Page 12.

## Table 1

Composition of Selected Special Items for the Final Tests

Form of Test	Range of Item Difficulty Values	Range of Item Discriminatory Indices
A	.61 to .80 (mainly .70)	+.48 to +.87
В	.41 to .60 (mainly .50)	+.36 to +.89
С	.21 to .40 (mainly .30)	+.43 to +.93

These one hundred and fifty items were drawn from an available total of 80 for Test A, 63 for Test B, and 79 for Test C.

The time limit for each form of the final test was the same, namely 25 minutes, and, on the basis of the theoretical concepts discussed in Appendix B, it was predicted beforehand that these forms would yield the following distributions:

> Test A : A negatively skewed distribution. Test B : Either a bimodal or an approximately rectangular distribution.

Test C : A positively skewed distribution.

In order to assure the most favourable circumstances for the empirical testing of these final forms of the test, the eleven duplimats required for them were typed and run off at McGill University. One hundred and eleven copies

Page 13.

of each form of the test, all comprising five pages, were then carefully made up. Six copies of each form were retained and the remainder were forwarded to the Defence Research Board for transmission to the appropriate Royal Canadian Air Force authorities at Trenton. Lastly, a covering letter was sent to Ottawa, detailing the exact conditions under which these final tests were to be given and emphasizing, once again, the importance of the randomized administration of the tests.

One copy of each of the final forms of the test will be found in Appendix E.

When these tests had been returned by Ottawa, they were scored. It was found that one copy each of Forms B and C, and two copies of Form A of these tests had to be discarded because they had been completed by French-speaking individuals. It should also be noted that the first five items of these tests were not scored, being "dummy" ones.

The frequency distributions for the three forms of the final test are tabulated in Table 2.

Distribution o	f Test Scores	on the Final Forms	of the Test
Test Score	<u>Test A</u>	<u>Frequencies</u> Test B	<u>Test C</u>
0	-	-	-
1	-	-	-
2	-	-	
3	-	1	3
4	-	-	6
5	-	-	7
6	-	l	1

Table 2

Distribution	of Test Scor	es on the Final Form	ns of the Test
<u>Test Score</u>	Test	<u>Frequencies</u>	<u>Test C</u>
7	-	. <b>_</b>	10
8	-	· <u> </u>	7
9	-	• •	5
10	-	. 2	4
11	-	• •	5
12	-	. 2	9
13	-	• 1	5
14	-	. 4	Ö
15	-	- 1	1 72
16	-	- Z	J A
17	-	. 4	7
18	-	9	- 4
19	۲ ۱	5 S S	2
20	1		ĩ
21	د ۱	2 1	3
26 97	נ	L ~ 4	3
20 21	2	2 4	2
25 25	Ĩ	1 4	-
26	]	- 1 6	l
27	4	- - - - - - - - - - - - - - - - - - -	3
28	5	3 4	3
29	Ę	5 <b>3</b>	-
30	e	6 –	2
31	]	1 2	1
32		3 1	Z
33	Ę	5 5	<b>-</b> ז
34	Ģ	5 5	1
35	e	6 D	-
36	4		-
37	ž		-
38	-	⊥ <del>≖</del> z 3	-
39	• -		1
40	Ĩ	⊥	-
41		- A 2	1
42		<b>7</b> 1	-
43		4 l	-
44		-	1
40		6 1	-
40		-	-
49		- 3	-
40 40		2 -	-
47 20		2	
50			
	N 10	3 104	104

# Table 2 (Cont'd)

The frequencies tabulated above were then graphed using the most appropriate class interval, namely one of 3 for Forms A and C, and one of 1 for Form B. These graphs are as follows:

Form	A	-	Graph	1	(page	17)
Form	В	-	Graph	2	(page	18)
Form	C	-	Graph	3	(page	19)

The discriminatory capacity indices for these distributions of test scores were also calculated, being determined from Ferguson's new formula (5, 1949), whence

$$\chi = \frac{n^2 - \sum_{i=1}^{k+1} fi^2}{n^2 - \frac{n^2}{k+1}}$$

when  $\delta =$  discriminatory capacity index of test distribution and n = number of testees

and fi = number of testees making total score i

and k = number of items

and k+l = number of possible scores

The obtained indices, together with the means and the standard deviations of the final test distributions, and similar statistics for a theoretical normal distribution are tabulated in Table 3.

		<u>Stati</u>	stics	of	Final	Test	Form	Distributi	ons
Form	of	Test	N		Discr Capac	iminat ity Ij	to <b>ry</b> ndex	Mean	Standard Deviation
	A		103			.9771		36.50	8.29
	в		104			.9821		27.63	9.48
	С		104			.9706		14.55	9.29
Norma	al		104			.9721		27.50	6.00

# Table 3





**EREQUENCIES** 



## Chapter V

# Summary and Conclusions

### Summary

The treatment of the problem may be briefly summarized as follows:

- (a) Recent developments in the field of mental test construction had culminated in Ferguson's paper on Test Discrimination (5, 1949).
- (b) Since this paper introduced a new rationale, it was felt that an empirical testing of its theoretical implications was required.
- (c) In order to apply these new ideas empirically, it was necessary to select items with the highest possible discriminatory capacity. This difficulty was solved by using Whitfield's modification (17, 1947) of Kendall's new coefficient of rank correlation (10, 1938).
- (d) It was also imperative that the test samples be restricted to a defined population. This criterion was met through the cooperation of the Defence Research Board.
- (e) Ten forms of the original test, each comprising 75 items, were constructed and randomly administered to a total sample of 286 testees. According to the empirical re-

sults obtained, the ten sub-samples involved were considered to be statistically comparable.

- (f) When these tests had been scored and the required statistics of the items calculated, it was found that there were not enough items to carry out the original empirical plan, which had been to construct an amended form of Ferguson's perfect discriminatory test (2, 1941).
- (g) The empirical approach was then modified in accordance with Ferguson's theory (2, 1941) and three final forms of the test, each comprising fifty control items, preceded by five "dummy" ones, were constructed. These final tests were designed to effect certain specified test distributions.
- (h) These final tests were administered at random to three numerically comparable sample groups, comprising 311 testees in all. The resulting empirical distributions, when tabulated, conformed closely to the theoretically predicted distributions.
- (i) The discriminatory capacity indices, as defined by Ferguson (5, 1949), were calculated for these final distributions and two out of three were found to be significantly higher than that obtained for a superimposed normal distributions of test scores.

#### Conclusions

It has already been stated in the section on "Methodology" in Chapter I that the empirical portion of this paper would either prove or disprove the theoretical deductions being tested. The conclusions which follow are, therefore, for the most part dependent upon the empirical data obtained.

These conclusions are as follows:

- (1) Ferguson's new theory of test discrimination (5, 1949) is not only demonstrably valid in its theoretical applications to the field of mental test construction, but it is also eminently suited for empirical treatment.
- (2) Whitfield's modification (17, 1947) of Kendall's new coefficient of rank correlation (10, 1938) is theoretically equivalent to biserial r correlation for the calculation of the discriminatory capacity of individual test items. In its practical use, however, this new statistic is preferable, being much easier to compute.
- (3) Ferguson's new index of test discrimination (5, 1949) is a useful, descriptive statistic.
- (4) Given a defined, restricted sample population and sufficient pretested items, it is possible to construct three types of tests of mental ability. These tests would effect the following results, all on a basis of total

test scores:

- (a) One test would select a required proportion of the testees and would efficiently discriminate between those rejected.
- (b) One test would efficiently discriminate between all testees.
- (c) One test would reject a required proportion of the testees and would efficiently discriminate between those selected.
- (5) The time element is very important in mental tests of the dichotomous type. It is felt that, if the time limits for forms A and C of the final test had been 20 and 30 minutes respectively, the empirical distributions would have approximated more closely to the predicted ones.
- (6) Since this new theory of test discrimination has proved so promising in the field of mental testing, it is suggested that future research should be along the following lines:
  - (a) A more numerous selection and variety of original items together with larger and broader test populations should be used.
  - (b) "Dummy" items should be included at both the beginning and end of tests designed to yield rectangular distributions.

(c) The time element should be thoroughly investigated. It is believed that, by varying the time limit and keeping the critical score constant, it should be possible to construct a test, which would select increasingly smaller or larger proportions of the testees, discriminating all the time between those so selected.

It is considered that, if the above suggestions were followed, it would be possible to construct mental tests, which would ultimately approach empirically the theoretical test of perfect discrimination.

## **Bibliography**

- Binet, A. and Simon T. A Method of measuring the Developement of Intelligence of Young Children. (Authorized English Translation by C.H. Town) The Press of the Courier-Herald Co., Lincoln, Ill., 1913.
- 2. Ferguson, George A. The Reliability of Mental Tests. University of London Press, 1941.
- 3. Ferguson, George A. Item Selection by the Constant Process. <u>Psychometrika</u>, 1942, 7, 29-39.
- 4. Ferguson, George A. On Statistical Problems in Test Construction. <u>Bulletin of the Canadian Psychological</u> <u>Association</u>, 1945, 5, 102-109.
- 5. Ferguson, George A. On the Theory of Test Discrimination. <u>Psychometrika</u>, 1949, (In Publication).
- 6. Finney, D.J. The Application of Probit Analysis to the Results of Mental Tests. <u>Psychometrika</u>, 1944, 9, 31-39.
- 7. Galton, Sir Francis. Hereditary Genius: an Inquiry into its Laws and Consequences. McMillan and Company, London, 1869.
- 8. Galton, Sir Francis. Inquiries into Human Faculty. J.M. Dent and Sons Limited, London, 1907.
- 9. Jackson, W.B., and Ferguson, George A. Studies on the Reliability of Tests. The University of Toronto Press, 1941.
- 10. Kendall, M.G. A new Measure of Rank Correlation. Biometrika, 1938, 30, 81-93.
- 11. Kendall, M.G. The Treatment of Ties in Ranking Problems. <u>Biometrika</u>, 1946, 33, 239-251.
- 12. Long, John A.; Sandiford, Peter and Others. The Validation of Test Items. The University of Toronto Press, 1935.
- 13. Pearson, Karl. The Life, Letters and Labours of Francis Galton. Cambridge University Press, Four Vol., 1914-30.

- 14. Pearson, Karl: Editor. Tracts for Computers. Cambridge University Press, 1920-27.
- 15. Sillitto, G.R. The Distribution of Kendall's Coefficient of Rank Correlation in Rankings containing Ties. <u>Biometrika</u>, 1947, 34, 36-40.
- 16. Thorndike, Edward L.; and Others. The Measurement of Intelligence. Teacher's College, Columbia University, 1926.
- 17. Whitfield, J.W. Rank Correlation between two Variables, one of which is ranked and the other dichotomous. <u>Biometrika</u>, 1947, 34, 292-296.

## Appendix A

## <u>Historical Background (Detailed)</u>

## Early Part

Although Sir Francis Galton did not originate the concept of the normal distribution, this being done by the Belgian astronomer Quetelet, he was the first scientist to really appreciate its potentialities and to apply its theory to the problem of human mental ability. Thus, we have his discourse on human genius (7, 1869) in which he attempted to evaluate the range of human mental ability in accordance with this concept and divided all human beings into fourteen categories, ranging from the lowest, "g", to the highest, "G".

In another of his books (8, 1907), Galton put his finger exactly on the problem with which we are dealing here when, discussing the application of these new statistical methods to the research on human intelligence, he stated "the statistician .... is tantalized by the hope of getting hold of sub-groups of sufficient size that shall contain no individuals except those belonging to the same species, and he is almost constantly baffled".

Following upon Galton came Karl Pearson, a disciple of his and the author of a biography upon him (13, 1914-30). Whilst Pearson was primarily a geneticist and, as such,

Page 28.

concerned with the laws of heredity, he was continually emphasizing the importance of the normal distribution curve and much of his work dealt with the application of this law to his own line of research. Probably, the chief interest of Pearson's work to us lies in his editing of "Tracts for Computers" (14, 1920-27) and in his founding of the journal "Biometrika". In both of these instances mentioned above, he was seemingly mainly interested in the value of the normal distribution curve to statistical methodology.

While Pearson was still very active and doing the work mentioned above, in France Alfred Binet was perfecting his tests, which were essentially to become the first standardized tests designed to measure human intelligence. It is true that Binet worked with children, which facilitated his task to some extent as he was dealing with maturing human organisms, but his contribution to this particular branch of science cannot be denied. Unfortunately, however, for some reason Binet had been impressed by this idea of the normal distribution of human mental ability and this led, in turn, to his concept of Mental Age. As he himself explains (1, 1913), this concept was intended to allow parents and teachers to evaluate the intelligence of any young child by comparing the child's Mental Age to his chronological one.

Although Binet did not carry his ideas, at this

Page 29.

time, far enough to be of any definite influence, the advent of W. Stern's concept of the Intelligence Quotient (I.Q.), i.e. <u>Mental Age in Months</u> x 100, which was embodied Chronological Age in Months

in the later Stanford revisions of Binet's original tests, proved to be a most powerful one, spreading far and wide. This concept by itself was acceptable, but when it was coupled with the idea of the normal distribution of human intelligence, it exerted an overwhelming influence on the theory of mental test construction. All tests were to be constructed so as to yield measurements of the individual I.Q.'s, which were all important, and the idea of differentiating between individuals at somewhat the same level was, to a large extent, ignored.

The effect of the above concept even today on mental test construction is readily apparent when the norms for male College Freshmen in the 1943 edition of the American Council on Education intelligence test are considered. In this test a gross score of between 50 and 59 was only made by 1.3% of the sample, whilst one of between 160 and 169 was only attained by 1.9% of the same sample population. On the other hand, 14.3% of this population scored between 100 and 109, and 16.2% attained scores ranging from 110 to 119. The lack of discrimination between individuals making scores near the mean on this particular test does not require elaboration.

From Binet, we pass on to Edward L. Thorndike,

Page 30.

whose influence on the theory of mental testing cannot be denied. In his book (16, 1926), Thorndike makes the interesting observation with regard to the normal distribution of human mental ability that "we gradually slid into the habit of using the doctrine (normal distribution). This fashion became so strong that, in recent years, psychologists have assumed symmetry, even though the units taken at their face value produced a markedly skewed distribution." However, even though Thorndike presents some empirical evidence that the ability in question is normally distributed in fourteen year old children, and suggests that this same distribution may be positively skewed in adult males, he does not attempt to apply these ideas to the theory of test construction. Conversely, his whole book seems to deal with the concept of the validity of intelligence tests and he attempts to treat this subject in the light of his own personal theories regarding the nature of human mental ability.

#### Recent Part

John A. Long, Peter Sandiford and others (12, 1935), examined the whole question of item validity and, whilst their survey is not, in a sense, directly applicable to this paper, it is important because they were concerned with exactly the same problem being faced here. They were attempting to test empirically certain theoretical methods for cor-
Page 31.

relating dichotomous responses on individual test items to total test scores. Thus, if discriminatory capacity be substituted for validity of test items, their problem becomes the one with which this paper is concerned. Whilst their extensive work does not bear directly upon this present paper since it is proposed to use a new item discriminatory index, which will be described later, it is quite interesting to note that on all empirical tests, except one, the biserial r method ranked first out of eight.

Later, Jackson and Ferguson (9, 1941) issued their bulletin on the reliability of tests. Here again, the experimental section of this bulletin dealing with the theoretical methods of computing the reliability of test items does not concern this present paper except to note that the Kuder-Richardson and split-half methods are cited as giving measures of the internal consistency of a test.

In his book (2, 1941), Ferguson has once again discussed this whole question, referring to the internal consistency of tests and treating the theory of rectangular distribution of test scores and the question of item selection.

Later, Ferguson examined the possibility of choosing test items by the "constant process" or Muller-Urban method (3, 1942). In this process each test item is described in terms of a limen, "which is an index of the point at which

Page 32.

an item discriminates and of the standard deviation of a limen, which is an index of the 'goodness' of discrimination". Two years later, Finney (6, 1944) followed up this paper of Ferguson's by one in which he pointed out the close analogy of the Muller-Urban method to Probit Analysis, in use in the field of toxilogical research, and described the latter method.

In another paper (4, 1945) Ferguson summed up the previous two papers, again discussed the theory of rectangular distribution of test scores and suggested that "the general rationale underlying the making of tests would not appear to be fully appreciated by many test makers". This thought has been mainly responsible for this present work.

Quite recently, Ferguson has crystallized his ideas on the rectangular distribution of test scores and has presented them in a paper (5, 1949).

### Appendix B

### Item Selection (Detailed)

When the question of item difficulty was investigated, obvious difficulties were at once encountered. It was quite readily apparent that the difficulty value of any single item was no measure whatsoever of its discriminatory capacity for it represents solely  $\sum \frac{\chi}{\chi}$ , when  $\sum \chi$  is equal to

the total number of individuals passing the item and N is equal to the total number of testees. It was also not denied that the results on a particular test item influenced the total test scores, since the latter were merely the sum of the former. But, in this case, tests comprising a large number of items, i.e. 75, were being dealt with empirically, so that this factor was not considered to be of any great consequence.

It was quite practicable to use biserial r correlation, if test scores were normally distributed, or point biserial r, if they were not, to correlate performances on a particular test item with total test scores. However, this represented a great amount of labour and, instead, a new theory of rank correlation was investigated and found ideally suited. It is described at length in the following paragraphs.

This new theory was first presented by the English statistician Kendall (10, 1938). His argument was based upon

the fact that, if we are given two series of ranks to correlate, one can always be arranged in descending cardinal order and the other compared to it. Kendall's original statistic,  $\checkmark$ , was concerned with the consistent and inconsistent comparisons, which would be obtained when this comparison was made, and was defined as follows:

Total possible number of consistent comparisons

or as 
$$f = \frac{K - L}{S}$$

when K = number of consistent comparisons and L = number of inconsistent comparisons and S = total possible number of consistent comparisons Also, since K+L = S, then  $\left| \frac{K - L}{S} \right|$  = 1 and it can be deduced that +1  $\leq f \leq -1$ 

In a private communication, Ferguson has demonstrated that this original statistic of Kendall's was equivalent to:

Number of consistent comparisons - number expected by chance

Total possible no. of consistent comp. - number expected by chance

This new coefficient of Kendall's was very well received, but the problem of tied rankings soon emerged and had to be dealt with separately. After the war years, Kendall himself attacked the problem (11, 1946) and, the following year, Sillitto (15, 1947) went even further. Finally, as a result of these previous works, Whitfield was able to deduce independently (17, 1947), his conclusions being afterwards verified by Kendall, the application of this new statistic to the correlation of two variables, one being ranked and the other dichotomous.

The formula for Whitfield's modification was exactly the same as the original one, i.e.

$$f = \frac{K - L}{s}$$

Also, all the observations regarding absolute value, range and Ferguson's private communication apply equally well to this new case. However, the method of calculation of consistent and inconsistent comparisons was somewhat different. All the individuals, who passed a given item, were ranked together and so were those, who failed this same item. This was, of course, in line with the premise that a certain ability is required to pass any given problem, i.e. a mental test item. Then, once the individuals taking a test had been ranked in order according to their total test scores, a pass on any given item followed by a failure on the same item was regarded as a consistent comparison. Similarly, a failure followed by a pass on an item was considered as an inconsistent comparison. It was thus obvious that, with regard to the above formula

S = XY

when X = total number of individuals passing a certain item and Y = total number of individuals failing the same item and N = X + Y = total number of individuals taking test

Also, we have that

K+L = S

therefore L = S-K

and K-L = K - (S - K), which provided an easy method of computing this statistic.

There were two possible objections to the use of this new statistic. Firstly, when the number of individuals taking a test was very small, its possible values, although they would always lie between +1.0 and -1.0, were greatly restricted. This problem was investigated and the conclusion arrived at that an "N" of 10 or less rendered this coefficient fairly ineffective. However, with an "N" of 26 to 30, there could be no objections raised to the use of "f" on this score.

Secondly, there was the whole question of ties in the continuous variable, i.e. individuals making the same

Page 37.

scores. This might have been due either to an irregular distribution of test scores or to the use of a test with a fairly small variance. It was quite true that, in the case of extended and frequent ties of this kind, the use of this method under discussion would have been largely invalidated. However, in the present case, perhaps due to a fortuitous combination of circumstances, there were very few ties in ranks, all of very small extent, and this eventuality did not have to be considered.

Now that the theoretical concepts to be used in the construction of the required final tests and in the selection of the desired items have been presented, the combination of these two approaches remains to be discussed. As Ferguson points out (2, 1941), it is theoretically possible, if we wish to select a third of our test population and to discriminate between them at the same time, to construct a test such that two-thirds of the testees make zero scores and the remaining third make scores over the K items such that

 $f_1 = f_2 = f_3 = \cdots = f_K = \_$ . This result would be ar-3K

rived at through the use of K items whose difficulty values, obtained from previous tests administered to the same test population, ranged from .3 to 00 through equal steps. Naturally, all these K items would have to discriminate perfect-

Page 38.

ly between testees.

However, in the present case, this theoretical ideal test would not have been desirable for special reasons. All our testees were to have been applicants for entry into the Armed Forces of Canada and it might have had an undesirable effect upon the civilian population at large if a fairly sizeable proportion of them were to have completely failed a Service Classification Test. It could have been argued that such unsuccessful candidates would not have been aware of their complete failures as they would not have been given their test scores. However, these applicants, especially the weaker ones amongst them, would certainly have had a very good idea of what had happened to them.

In an attempt to overcome this difficulty, a theoretical test of fifty items, all discriminating perfectly, was proposed. The construction of this test is shown in Table 4.

### Table 4

# Proposed Construction of Theoretical Test

Ttem	Nu	mber	Difficulty	Value
1		30	1.0	
31	-	40	.30 to	.21
41	-	<b>4</b> 5	.20 to	.11
46	-	50	.10 to	.01

The theoretical scores of a hundred testees on such a test are tabulated in Table 5.

### Table 5

# Theoretical Scores of a hundred Testees

Range	of	scores	Number of	Testees	making	Score
0	-	5		0		
6	-	10		0		
11	-	15		0		
16	-	20		0		
21	-	25		0		
26	-	30		70		
31	-	35		0		
36	-	40		10		
41	-	45		10		
46	-	50		10		
				100		

Such a test would have theoretically overcome the special objections, eliminated seventy per cent of all testees, on the basis of total test scores, and, at the same time, discriminated to a large extent among the selected thirty per cent of the testees, on the same basis.

Despite the above, when the empirical results

Page 40.

of the original tests were known, it was realized at once that this theoretical test still remained only theoretically obtainable due to the blurring of the answer patterns. However, a large number of items with fairly high discriminatory capacity were obtained and so an alternative plan was adopted. Three tests were constructed with these special items and they were all designed to discriminate between testees as described by Ferguson (2, 1941). Test "A" contained items with a fairly high difficulty value (mean .70) and was constructed so as to yield a negatively skewed distribution of test scores. Test "B" comprised items, whose mean difficulty value was .50, and was designed to yield either a bimodal or an approximately rectangular distribution. Finally, Test "C" contained items with a fairly low difficulty value (mean .30) and, being the converse of Test "A", was intended to yield a positively skewed distribution.

#### Appendix C

# Empirical Data: Original Part (Detailed)

In the first instance, approximately 1,050 items of mental ability, each on a separate 3 x 5 inch index card, were listed for the original tests. These items were, for the most part, derived from established tests of intelligence. In addition, a few were taken "in toto" from such tests, principally from the "Moray House Experimental Test".

In collaboration with the Director of this research, each of these items was studied individually and those, which seemed unsuitable, were rejected. Through this process of careful elimination, the items in question were finally reduced to 750. The distribution and the code system of marking these items, each on its own individual card, are shown in Table 6.

#### Table 6

### Distribution and Code Marking of Original Items

Type of Problem	Group	Sub-Classi- fication	No. of Items	Sub-Totals
Alphabetical	Α	<b>A-1-1</b> to 20	20	
		A-2-1 to 20	20	
		A-3-1 to 20	20	
		A-4-1 to 20	20	

Table 6	(Cont'	d)
---------	--------	----

Type of Problem	Group	Sub-Classi- fication	No. of Items	Sub-Totals
Alphabetical	A	A-5-1 to 20	20	
		A-6-1 to 20	20	
		A-7-1 to 10	<u>10</u>	130
Mathematical	В	B-1-1 to 10	10	
		B-2-1 to 10	10	
		B-3-1 to 10	10	
		B-4-1 to 10	10	
		B-5-1 to 10	10	
		B-6-1 to 10	10	
		B-7-1 to 10	10	
		B-8-1 to 10	10	
		B-9-1 to 10	10	
		B-10-1 to 10	<u>10</u>	100
Mathematical Serie	s C	C-1-1 to 80		80
Logical	D	D-1-1 to 30	30	
<i>U</i>		D-2-1 to 30	30	
		D-3-1 to 30	30	
		D-4-1 to 30	<u>30</u>	120
Vocabulary	E	E-1-1 to 120		120
Analogical	F	F-1-1 to 40	<b>4</b> 0	
		F-2-1 to 10	10	
		F-3-1 to 20	20	
		F-4-1 to 30	<u>30</u>	100

### Table 6 (Cont'd)

Type of Problem	Group	Sub-Classi- fication	No. of Items	Sub-Totals
Classification	G	G-1-1 to 80	80	
		G-2-1 to 20	20	100
		Grand Total o	of Items	, 750

It should be emphasized that a sub-classification within a group here indicates a special type of problem belonging to a larger group. Thus, all the problems in group "C" were of the same type, whilst group "B" was divided into ten distinct types of mathematical problems, each comprising ten items.

As far as possible, the items used were such that a definite answer had to be supplied. However, if an item allowed a choice of possible answers, six alternatives were always presented. Similarly, if an item demanded the selection of a synonym or antonym, five possible answers were always given. In this manner, it was hoped to render negligible the number of correct responses.

In order to ensure that there should be a random distribution of these 750 items amongst the original ten tests, the special system shown in Table 7 was adopted. It is felt that this table is self-explanatory and the systematic randomization of items thus achieved was acceptable to the Director of this research.

Item Code No.	Form of Test									
	1	2	3	4	5	6	77	8	9	10
<b>A-</b> 1-	l	2	3	4	5	6	7	8	9	10
<b>A-</b> 1-	20	11	12	13	14	15	16	17	18	19
<b>A-</b> 2-	9	10	1	2	3	4	5	6	7	8
<b>A-</b> 2-	18	19	20	11	12	13	14	15	16	17
A-3-	7	8	9	10	1	2	3	4	5	6
			;	and so	o on (	down '	to			
G-2-	8	9	10	l	2	3	4	5	6	7
G-2-	17	18	19	20	11	12	13	14	15	16

#### Table 7

Randomized Distribution of Items in the Original Tests

Thus, according to this arrangement, Item A-1-1 was placed in Test 1, Item A-2-3 in Test 5, Item A-3-4 in Test 8 and so forth.

Ten groups of 75 cards each, representing 75 items each in Tests 1 to 10 inclusive were then available. Each test was considered in turn and an attempt was made to arrange the items in ascending order of difficulty. As was later discovered from the answer patterns to these tests and, as was to be expected, this attempt was none too successful.

When this arrangement of test items had taken place, items 30, 40, 50, 60 and 70 of Test 1, which were all of different types, were each repeated nine times on special cards. Then the same numbered items in Tests 2 to 10 inclusive were replaced by these similar-numbered items from Test 1. This, of course, required the discarding of nine items, which were in each case of a comparable type, from Tests 2 to 10 inclusive and also necessitated the slight rearrangement of these tests in order that no two similar items might be adjacent to one another. The somewhat bizarre procedure described above represented an attempt to measure the comparability of the different sub-samples involved and the results obtained will be described later.

Now the original tests were ready to be made up. In order to speed up the whole procedure, the first two pages, which were similar for all forms of the test, were typed on duplimats together with the seventy-five items of Test 1. The nine other groups of seventy-five cards each, representing Tests 2 to 10 inclusive, were forwarded to the Defence Research Board for similar treatment, together with the five duplimats described above, and a covering letter. In order that no item might be displaced accidentally, each card was individually marked to designate its proper location, thus 3-47 denoted Test 3, Item 47. Unfortunately, when the other necessary duplimats were made up in Ottawa and the ten forms of the test run off and made up for distribution to the Armed Forces, a somewhat unhappy mistake occurred. As can be seen by reference to Test 1 (Appendix D), it was intended that all the Alphabetical Items under Code "A" should be preceded by the alphabet in capitals. Since this was not also done at Ottawa for Tests 2 to 10 inclusive, the difficulty value of the items in Test 1 tended to be slightly different from that of the remainder of the items.

It had been originally intended that this problem should be confined to test samples comprising Englishspeaking personnel, who had volunteered as recruits at any one of the Canadian Army's recruiting depots across Canada. This restriction to such persons was necessary because the tests were entirely verbal in nature. However, because of the time element, the testees were instead non-commissioned personnel of the Royal Canadian Air Force, both recruits and reenlistments, who had already been accepted into the Air Force and were actually tested at No. 2 Manning Depot at Trenton, Ontario.

Originally, 299 copies of the original tests were forwarded to Trenton by Ottawa. These comprised 30 copies each of all tests except Test 6, one copy of this test being omitted in error. One copy of each of these tests will

Page 47.

be found in Appendix D.

By prearrangement, these original tests were administered randomly so as to obtain, if possible, comparable sub-samples. Thus, if twenty persons were being tested at one time, individuals 1 and 11 would be attempting Form 1 of the tests, individuals 2 and 12, Form 2 of the tests and so forth.

When these 299 completed tests had been returned and before scoring, it was found necessary to invalidate 13 of them either because they had been incorrectly made up (one page missing or two pages the same) or because they had been administered to personnel of French origin. Since Air Force Classification Test results for all tested personnel were given on the tests, it was possible to decide quite accurately when this linguistic factor entered into the picture.

Table 8 shows the final distribution of the 286 tests available for scoring.

#### Table 8

Form of Test	Original No. of <u>Tests Completed</u>	Invalid Incomplete	ations Ling. Fac.	Final No. of <u>Tests Avail.</u>
l	30	-	-	30
2	30	2	2	26
3	30	-	-	30
4	30	-	2	28
5	30	-	1	29

#### Final Distribution of Tests available for Scoring

<u>Table</u>	38	Con	t'	d)	

form of Test	Original No. of <u>Tests Completed</u>	Invali Incomplete	dations Ling. Fac.	Final No. of <u>Tests <b>Av</b>ail.</u>
6	29	-	-	29
7	30	l	2	27
8	30	-	-	30
9	30	l	1.	28
10	30	-	1	29
Tota	als 299	4 -	F 9 = 13	286

When the original tests were being scored, it was also found that a certain number of items had to be invalidated. The total number of the items so treated in the ten tests was 35 and, whilst some of these had been incorrectly typed, the majority of these invalidations were due to items, which turned out to be quite ambigious, and had to be discarded. The distribution of these items is shown in Table 9.

### Table 9

### Distribution of Invalidated Items in Original Tests

Form of Test	Original No. of Items	Items Invalidated	Total No. of Items Invalid.	Final No. of Items
1	75	37	1	74
2	75	7; 59; 71	3	72
3	75	29; 49	2	73
4	75	4; 31; 37; 43	4	71
5	75	l; 9; <b>47;</b> 59	4	71
6	75	5; 55	2	73
7	75	2; 10; 28; 57; 63; 67	6	69
8	75	15; 38	2	73
9	75	2; 11; 15; 31; 39; <b>47;</b> 59	7	68
10	75	9; 22; 32; 39	4	71
				9
Tota	ls 750		35	715

Once all the tests had been scored, omitting the invalidated items, the total scores for each form of the original ten tests were tabulated. Since the maximum possible score for each form of the test varied, the average scores were calculated on a percentage basis. As a further measure of the distributions of the total test scores, the coefficient of variation for each form of the test was also worked out. The results of these calculations are shown in Table 10.

## Table 10

	Aver	ients			
Form of Test	"N"	Possible Score	Total <u>Scores</u>	Average Score in Percentage	Coefficient of Variation
l	30	74	1,531	69.0	19.71
2	26	72	1,172	62.6	17.87
3	30	73	1,491	68.1	14.04
4	28	71	1,317	66.2	20.05
5	29	71	1,321	64.2	18.05
6	29	73	1,365	64.5	17.38
7	27	69	1,259	67.6	18.85
8	30	73	1,414	64.6	18.29
9	28	68	1,194	62.7	17.26
10	29	71	1,362	66.1	22 <b>.4</b> 0
Totals	286	715			

Furthermore, the difficulty values for the special items, i.e. 30, 40, 50, 60 and 70, for all forms of the original tests were calculated. These values are tabulated in Table 11.

Ta	h1	e	٦	1
- 0	~-	<u> </u>	، ملہ 🚬	_
			_	

Form of	<b>"</b> N"			Item Numb	er	
Test		30	40	50	60	70
1	30	.90	.87	.77	.97	.66
2	26	.81	.89	.62	•77	.77
3	30	.90	.97	•77	.76	.71
4	28	.93	.96	.71	.81	.63
5	29	•93	.96	.72	•75	.77
6	29	•93	.93	.83	•83	.62
7	27	.89	•96	.89	.75	•78
8	30	.90	.87	.74	•90	.62
9	28	.89	.93	.75	•88	•55
10	29	.93	.90	.62	.70	.64

Difficulty Values of Special Items in Original Tests

Total "N" 286

The results shown in Table 10 and 11 were then discussed with the Director of this research. It was felt that, because of the special nature of Test 1 (previously described) and taking into account the total size of the original sample, the ten sub-samples involved could be considered statistically comparable, within the limits of sampling error.

FORM 1

### CANADIAN ARMY CLASSIFICATION TEST

## FILL IN THE FOLLOWING PARTICULARS WHEN YOU ARE TOLD

المجني منه المسلح ومنتقد منطقة	
Your first name	
Your last name	
· · · · · · · · · · · · · · · · · · ·	
Formal schooling	
Centre	and concerning for any for the concerning of the
Date	<u></u>

Age in years

and a second second

Read the following carefully:

- 1. This is a short test to find out how quickly and accurately you can answer a series of simple questions.
- 2. Some of the questions are easy. Others are hard. No one is expected to do everything, but do the best you can.
  - 3. If you cannot do any question, leave it out and go on to the next. Return to it later if you have any time left.
  - 4. When you finish one page go on to the next.
  - 5. You may do any rough work or figuring at the sides of the pages if you wish.
  - 6. The answers are to be written in the brackets at the right of the questions.

Here are some practice questions to show what you are expected to do:

- 1. What number comes next in the following series ? (12) 2, 4, 6, 8, 10 (12) The numbers increase 2 at a time, therefore the number after 10 will be 12, and this number has been written in the brackets at the right.
- 2. Which word does not belong in this list?
  (a) green (b) violet (c) red (d) sweet (e) yellow (f) black (d)
  These are all colcurs except sweet, so d is written in the brackets.
- 3. Bird is to air as fish is to (a) water (b) swim (c) bait (d) net (e) catch (a) The answer is a, so this letter is written in the brackets.
- 4. ABCDEFGHIJKIMNOPQRSTUVWXYZ Print the letter before the sixth letter from the beginning of the ( E ) alphabet. The sixth letter from the beginning of the alphabet is F, and the 'the letter before it is E, so E has been written in the brackets.
- 5. Last Tuesday was April 19th. If next Thursday is three days away, what day of the month is today? (25) Today must be Monday, April 25th, so 25 has been written in the brackets.

Now go ahead and try the following questions:

- 6. What number comes next in the following series ? 1, 10, 2, 20, 3, 30
- 7. Which word does not belong in this list ? (a) wood (b) iron (c) copper (d) lead (e) tin (f) aluminum (

. (

(

l

(

)

)

)

١

)

- 8. Snow is to winter as rain is to (a) water (b) umbrella (c) cloud (d) shower (e) summer
- 9. One third of one half is ?
- 10. A car is travelling at 60 m.p.h.. How long will it take to cover 240 miles ?

The questions you have just done were practice questions. The questions in this test must be answered in the sure way You will be given 35 minutes to do this test.

Ask no questions at all during the test.

DO NOT TURN OVER THIS DOCK UNTIL YOU WRE TOLD TO DO BO

1.	Black is to white as love is to (a) affection (b) like (c) leave (d) hate (e) admire	(	.)
2.	Prevent means the same as (a) stop (b) help (c) open (d) shut (e) wide		····)
3.	If the second day before yesterday was Monday what day will it be tomorrow ?	(	)
4.	What number comes next in the following series ? 1/2, 3/4, 5/8	(	)
5.	ABCDEFGHIJKIMNOPQRSTUVWXYZ If the alphabet were reversed which letter would occupy the position that D does now ?	(	)
6.	Link is to lank as sill is to (a) sall (b) sell (c) sole (d) sull (e) sail		)
7.	What number comes next in the following series ? 1.01, 2.05, 3.09, 4.13	(	)
8.	A car is travelling a distance of 180 miles. If it covers the first half of the journey in 170 minutes and the second half in 130 minutes, what is its average speed for the journey ?	٤	)
9.	Engine is to car as spring is to (a) gear (b) wheel (c) clock (d) tension (e) wagor	(	)
10.	Print the letter in the word "Circumspect" that is as far from the beginning as R is from the end	(	)
11.	What number comes next in the following series ? 5, 6, 8, 11	(	)
12,	Rake is to take as rail is to (a) tail (b) tale (c) talk (d) tike (9) teme	(	)
13.	Entail means the same as (a) allow (b) permit (c) necessitate (d) deny (e) hope	(	)
14.	April is to August as September is to ?	(	)
15.	Indicate the word that does not belong. (a) train (b) car (c) plane (d) road (e) glider (f) ship	(	)
16.	What number comes nowt in the following series ? 1/3, 2/5, 3/7	. (	)
17.	A boy covers 1/6 of his journey on foot; he rides a streetcar for 4/5 of his journey and then covers the final mile of his journey on foot again. How long was his journey ?	(	)
18.	ABCDEFGHIJKLMNOPGRSTUVWXYZ If the alphabet started at J instead of A, what would then be the ninth letter ?	(	)
19.	Indicate the word that does not belong (a) engine (b) fan (c) gear (d) piston (e) tire (f) cylinder	(	)
20.	Urbane means the same as (a) urban (b) suave (c) loud (d) fair (e) long	(	)
21.	April is to August as November is to ?	(	)

	4		
22.	What number comes next in the following series ? 3, 9, 8, 6, 13	(	)
23.	If two cars four miles apart are travelling towards one another at 25 and 15 m.p.h. respectively, how long will it be before they meet ?	-(	•" ====================================
24.	ABCDEFGHIJKIMNOPORSTUVWXYZ If all the letters in the word "range" were removed from the alphatet, what would then become the fourteenth letter ?	(	)
25.	Indicate the word that does not belong. (a) idea (b) thought (c) act (d) notion (e) fancy (f) dream	(	)
26.	Tall is to short as peace is to (a) plenty (b) patience (c) suffering (d) fierce (e) strife		)
27.	How many cubic fest of water will fill a tank 5 1/2 ft. by 8 ft. by 12ft. ?	(	)
28 <b>.</b>	ABCDEFGHIJKIMNOPQRSTUVWXYZ Print the fourth letter before the minth letter after X in the alphabet.	(	)
29.	Indicate the word that does not belong. (a) number (b) total (c) score (d) amount (e) add (f) sum	(	)
30.	Tall is to short as giant is to (a) elf (b) dwarf (c) monster (d) fairy (c) goblin	(	)
31.	Mute means the same as (a) loud (b) clear (c) soundless (d) soft (e)far	(	)
32.	ABCDEFGHIJKIMNOPQRSTUVWXYZ What letter comes just as far after 2 in the alphabet as O comes after L in the word "Simplification" ?	(	)
33 <b>.</b>	Indicate the group that does not belong. (a) 30 (b) 70 (c) 80 (d) 75 (e) 40 (c) 90	(	)
34.	Branch is to tree as coach is to (a) plane (b) boat (c) fish (d) train (e) snake	(	)
35.	Enhance means the same as (a) plunder (b) intensify (c) paint (d) draw (e) sketch	(	)
36.	ABCDEFGHIJKIMNOPQRSTUVWXYZ What letter comes just as far after I in the alphabet as T comes after E in the word "Realization" ?	(	)
37.	What number comes next in the following series ? 16, 71 12, 9, 8	(	)
38 <b>.</b>	A boy left home at two o'clock exactly, walking at 4 miles per hour. If he arrived at his destination at 45 minutes past three o'clock, what distance had he covered ?	(	)
39 <b>.</b>	ABCDEFGHIJKIMNOPORSTUVWXYZ If the alphabet were reversed , which letter would occupy the position that W does now ?	(	)
40.	Pulverize means the same a: (a) crush (b) hit (c) beat (d) slap (e) push	(	)

, ```

1.	A man makes three purchases, which amount to \$ 4.20. If the sum of the first and third purchases is half that of the second one, what is the amount of the second purchase ?	(	)
42.	ABCDEFGHIJKIMNOPQRSTUVWXYZ If the alphabet started at F instead of A, what would then be ninth letter ?	(	)
43.	If 60 m.p.h. is equivalent to 88 feet per second, how fast must a car be travelling to cover 528 feet in four seconds ?	(	)
44.	Dude means the same as (a) knave (b) victim (c) object (d) heavy (e) dandy	(	)
45.	Print the letter in the word "Retaliation" that is as far from the end as 0 is from the beginning.	( .	)
46.	Indicate the word that does not belong. (a) picture (b) frame (c) drawing (d) painting (e)photograph (f) portrait	(	)
47.	Surmise means the same as (a) believe (b) conjecture (c) state (d( trust (c) hold	(	)
48.	March is to September as July is to ?	(	)
49.	What number comes next in the following series ? 2/7, 4/14, 8/21	(	)
50.	Meal is to male as bear is to (a) bore (b) reab (c) rabe (d) bare (e) bear	(	)
51.	Vindictive means the same as (a) evil (b) hard (c) rage (d) revengeful (c) victim	C	)
52.	In a certain code MVYDHYK means "forward", Use this code to write "road".	(	)
53 <b>.</b>	Indicate the word that does not belong. (a) old (b) ore (c) more (d) orange (e) pasts (f) often	(	)
54.	Tall is to short as solid is to (a) hard (b) heavy (c) strong (d) rock (c) hollow (f) deep	(	)
55.	Chasm means the same as (a) rift (b) range (c) wide (d) long (c) flat	(	)
56.	One-fourth is to one-eleventh as 55 is to ?	(	)
57.	What is the number two-ninths of which is 18 ?	(	)
58.	ABCDEFCHIJKLMNOPORSTUVWXYZ If all the letters in the word "Raise" were removed from the alphabet, what would then become the tenth letter ?	(	)
59.	Indicate the word that does not belong. (a) woman (b) lock (c) ship (d) apartment (e) alive (f)locomotive	(	)
30.	In a certain code KLWPSHAL means "Depilate". Use this code to write "tide".	(	)
51.	Indicate the word that does not belong. (a) age (b) aim (c) again (d) plain (c) ace (f) art	(	)

	and the second		
62.	One-fourth is to one-fifth as 40 is to ?	(	)
53.	What number, when multiplied by itself, is 9 less than one-seventh-of-126-?	(	_)_
64.	ABCDEFGHIJKIMNOPQRSTUVWXYZ Print the seventh letter before the fourth letter after O in the alphabet	(	)
65.	What number comes next in the following series ? 5, 1/5, 7, 2/7, 9	(	)
66.	Anecdote means the same as (a) poison (b) tale (c) drug (d) medecine (c) relief	(	)
67.	If the third day before yesterday was Monday, what day will it be tomorrow ?	(	)
68.	Easy is to simple as vehicle is to (a) aeroplane (b) car (c) horse (d) dog (e) vehement	(	)
69.	ABCDEFGHIJKLMNOPQRSTUVWXYZ If every second letter, namely B,D,etc, were left out of the alphabet, which letter would the become the tenth one ?	(	)
70.	Indicate the group that does not belong. (a) ACD (b( RTU (c) NPQ (d) EHI (e) LNO (f) DFG	(	)
71.	Fracas means the same as (a) push (b) pull (c) touch (d) row (e) sleep	(	)
72.	In a certain code KPZWSBTL means "displume". Use this code to write "lime".	(	)
73.	One-seventh is to one-minth as 63 is to ?	(	)
74.	A pie is cut so that one piece, which is one-twelfth of the pie, is twice as large as each of the other pieces. Into how many pieces is the pie cut ?	- <b>(</b>	)
75 <b>.</b>	If today was the twelfth of the month and a Tuesday, what day was the first of the month ?	(	)

IF YOU HAVE ANY TIME LEFT GO BACK AND CHECK YOUR ANSWERS

· · · · ·

6

ļ

FORM 2

## CANADIAN ARMY CLASSIFICATION TEST

## FILL IN THE FOLLOWING PARTICULARS WHEN YOU ARE TOLD

Your first name
Your last name
Formal schooling
Centre
Date
Age in years

1

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

يد وي

Read the following carefully:

- 1. This is a short test to find out how quickly and accurately you can answer a series of simple questions.
- 2. Some of the questions are easy. Others are hard. No one is expected to do everything, but do the best you can.
- 3. If you cannot do any question, leave it out and go on to the next. Return to it later if you have any time left.
- 4. When you finish one page go on to the next.
- 5. You may do any rough work or figuring at the sides of the pages if you wish.
- 6. The answers are to be written in the brackets at the right of the questions.

Here are some practice questions to show what you are expected to do:

- What number comes next in the following series ?
   2, 4, 6, 8, 10 (12) The numbers increase 2 at a time, therefore the number after 10 will be 12, and this number has been written in the brackets at the right.
- 2. Which word does not belong in this list?
  (a) green (b) violet (c) red (d) sweet (e) yellow (f) black (d) These are all colours except sweet, so d is written in the brackets.
- 3. Bird is to air as fish is to
  (a) water (b) swim (c) bait (d) net (e) catch
  (a) The answer is a, so this letter is written in the brackets.
- 4. ABCDEFGHIJKIMNOPQRSTUVWXYZ Print the letter before the sixth letter from the beginning of the (E) alphabet. The sixth letter from the beginning of the alphabet is F, and the the letter before it is E, so E has been written in the brackets.
- 5. Last Tuesday was April 19th. If next Thursday is three days away, what day of the month is today? (25)
   Today must be Monday, April 25th, so 25 has been written in the brackets.

Now go ahead and try the following questions:

- 6. What number comes next in the following series ? 1, 10, 2, 20, 3; 30
- 7. Which word does not belong in this list ? (a) wood (b) iron (c) copper (d) lead (e) tin (f) aluminum (
- 8. Snow is to winter as rain is to (a) water (b) umbrella (c) cloud (d) shower (e) summer
- 9. One third of one half is ?
- 10. A car is travelling at 60 m.p.h.. How long will it take to cover 240 miles ?

The questions you have just done were practice questions. The questions in this test must be answered in the same way You will be given 35 minutes to do this test.

Ask no questions at all during the test.

DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO SO

.

ſ

(

(

)

)

)

)

)

1.	Black is to white as day is to (a) light (b) noon (c) afternoon (d) night (e) evening	(	)
2.	If the day after tomorrow is Wednesday then the day before yesterday was		`
. <b>3</b> .	Indicate the word that does not belong (a) eat (b) feat (c) easy (d) erect (e) emulate (f) even	(	)
4.	Engine is to car as locomotive is to (a) train (b) railway (c) track (d) coach (e) signal	(	.)
5.	Propel means the same as (a) trap (b) trip (c) push (d) hold (e) run	<b>(</b> .	)
6.	Indicate the word that does not belong (a) red (b) scarlet (c) purple (d) pink (e) crimson (f) green	(	)
.7.	Droll means the same as (a) humorous (b) funny (c) odd (d) facetious (e) pleasing	(	)
8.	What number comes next in the following series 1, 4, 3, 6, 5	(	)
9.	A car is travelling a distance of 120 miles. If it covers the first half of the journey in 95 minutes and the second half in 85 minutes what is its average speed for the journey?	к (	)
10.	Print the letter in the word "symbolism". That is as far from the beginning as "B" is from the end	(	)
11.	Rake is to take as rung is to (a) rank (b) raid (c) tung (d) tang (e) teng	2 (	)
12.	Indicate the word that does not belong (a) wall (b) window (c) large (d) door (e) floor (f) ceiling	с (	)
13.	Ensue means the same as (a) trust (b) despise (c) result (d) hate (e) love	(	)
14.	February is to June as July is to	і Сан	)
15.	What number comes next in the following series 8, 5, 11, 8, 14	( (	)
16.	A boy covers $1/5$ of his journey on foot; he rides a street car for $\frac{3}{4}$ of his journey and then covers the final $1\frac{1}{2}$ miles of his journey on foot again. How long was his journey?	а. С	)
17.	If the alphabet started at J instead of A, what would then be the tenth letter?	(	)
18.	Indicate the word that does not belong (a) aim (b) object (c) goal (d) end (e) start (f) upshot	(	)
19.	Schema means the same as (a) play (b) drama (c) musical (d) outline (e) view	<b>(</b> .	}
20.	February is to June as September is to	(	)
21.	If two cars eight miles apart are travelling towards one another at 55 and 25 M.P.H. respectively, how long will it be before they meet?	(	)

If all the letters in the word "force" were removed from the 22. alphabet, what would then become the thirteenth letter? ( ) Indicate the word that does not belong 23. (a) image (b) picture (c) sketch (d) writing (e) copy (f) painting ( ) Amorous means the same as 24. (a) pleasing (b) bitter (c) loving (d) sweet (e) hard ( ) How many cubic feet of water will fill a tank 6 ft. by 25 + 7월 ft. by 11 ft. ( ) 26. Print the seventh letter before the third letter after R in the alphabet. ) 27. Indicate the word that does not belong (a) hoot (b) sleep (c) squeak (d) hiss (e) shout (f) squeal ) ,28. Myth means the same as (a) history (b) writing (c) speech (d) legend (e) talk ) .29 . What letter comes just as far after K in the alphabet as B comes after S in the word "unjustifiable" . ..... ( ) 30. Tall is to short as giant is to (a) elf (b) dwarf (c) monster (d) fairy (e) goblin ( . . . . . ) 31. Boat is to see as diver is to (a) helmet (b) suit (c) underwater (d) ground (e) air ( ) - . .. Endure means the same as 32. (a) possess (b) have (c) hold (d) undergo (e) trust (... ) 33. What number comes next in the following series 10, 11, 14, 11, 12, 15 ) ( .... 34. Tall is to short as stupid is to (a) dumb (b) idiot (c) intelligent (d) cautious (e) sly . ..... ( ) .35. What number comes next in the following series 5/1, 8/2, 11/3 ) • -•.... l Link is to lank as till is to 36. (a) tell (b) tall (c) toll (d) talk (e) take ) (. - . . . ... 37. A boy left home at 30 minutes past two o'clock, walking at 5 miles per hour. If he arrived at his destination at 42 minutes past three o'clock, what distance had he covered? ) ( 38. If the alphabet were reversed which letter would occupy the position that N does now? ) 39 . What number comes next in the following series 10, 9; 13, 7, 6 ( . ) 40. Pulverize means the same as ) ( (a) crush (b) hit (c) beat (d) slap (e) push ---Print the letter in the word "behaviour". That is as far 41. ) ( from the end as "I" is from the beginning. If 60 M.P.H. is equivalent to 88 feet per second, how fast 42. ( ) must a car be travelling to cover 660 feet in six seconds.

4

ŀ

	43.	Tardy means the same as (a) late (b) early (c) run (d) walk (e) talk	(	
	44.	June is to November as April is to	(	]
	45 •	What number comes next in the following series 15, 3, 18, 8, 21	. (	)
	46.	Surreptitious means the same as (a) open (b) closed (c) secret (d) wide (e) long	(	)
	47.	A man makes three purchases which amount to \$5.40. If the sum of the first and third purchases is half that of the second one, what is the amount of the second purchase?	: ; ;	•
	48.	If the alphabet started at E instead of A, what would then be the eleventh letter?		)
	49 •	Tall is to short as show is to (a) explain (b) act (c) expose (d) confess (e) notice (f) hide	Ŧ (.	)
	50.	Meal is to male as bear is to (a) bore (b) reab (c) rabe (d) bare (e) boar	(	)
	51.	If the alphabet were reversed which letter would occupy the position that E does now?	(	.)
•	52 <b>.</b>	Burnish means the same as (a) erase (b) polish (c) roughen (d) rude (e) paste	(	)
	53.	One-seventh is to one-twelfth as 48 is to	(	)
	54。	If all the letters in the word "stamp" were removed from the alphabet, what would then become the seventeenth letter?	( ).	)
	55.	What is the number two sevenths of which is 14	(	)
	56.	Indicate the word that does not belong (a) boy (b) high (c) aeroplane (d) suit (e) tree (f) boat	(	)
	57.	If every second letter, namely B, D, etc., were left out of the alphabet, which letter would then become the eleventh one?	(	)
	58.	Prohibit means the same as (a) forbid (b) allow (c) leave (d) part (e) go	( (	)
	59.	What number comes next in the following series 7, 48, 8, 63, 9	(	)
	60.	In a certain code KLWPSHAL means "Depilate" use this code to write "Tide".	(.	)
	61.	One-third is to one-fourth as 12 is to	(	)
	62.	If the first of January is a Friday what day must the last day of the month be?	<b>(</b> .	)
	63.	What number, when multiplied by itself, is 8 less than one-third of 99	(	)
,	64.	Print the ninth letter before the second letter after W in the alphabet	<b>(</b> .	)

65 <b>.</b>	In a certain code PQNAZMUD means "Debonair", use this code to write Robe			
66.	Indicate the word that does not belong		. <b>(</b>	)
	(a) base (b) boy (c) bill (d) bald (e) brave (f) slave		(	)
67.	Easy is to simple as maze is to (a) lane (b) road (c) highway (d) puzzle (e) station		2 (	)
68.	Indicate the group that does not belong (a) 36 (b) 72 (c) 108 (d) 24 (e) 98 (f) 84			)
69.	What letter comes just as far after P in the alphabet as I comes after X in the word "Inexactitude"		(	)
<b>7</b> 0.	Indicate the group that does not belong (a) ACD (b) RTU (c) NPQ (d) EHI (e) LNO (f) DFG		) (.	)
71.	What number comes next in the following series $1/3$ , $2/2$ , $3/9$ , $4/4$ , $5/27$		(.	)
<u>7</u> 2.	If today is Friday what was the fourth day before tomorrow?	<u></u>	(.	).
73.	One-sixth is to one-eleventh as 33 is to		(.	)
74.	In a certain code OAGZFOK means "Country"。 Use this code to write Your		(	)
75 •	A pie is cut so that one piece, which is one-thirteenth of the pie, is twice as large as each of the other			
	pieces. Into how many pieces is the pie cut?	•••	(.	)

IF YOU HAVE ANY TIME LEFT GO BACK AND CHECK YOUR ANSWERS

FORM 3

# CANADIAN ARMY CLASSIFICATION TEST

# FILL IN THE FOLLOWING PARTICULARS WHEN YOU ARE TOLD

Your first name	
Your last name	
Formal schooling	
Centre	
Date	
Age in years	

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

.

ead the following carefully:

1. This is a short test to find out how quickly and accurately you can answer a series of simple questions. 2. Some of the questions are easy. Others are hard. No one is expected to do everything, but do the best you can. 3. If you cannot do any question, leave it out and go on to the next. Return to it later if you have any time left. 4. When you finish one page go on to the next. 5. You may do any rough work or figuring at the sides of the pages if you wish. 6. The answers are to be written in the brackets at the right of the questions. Here are some practice questions to show what you are expected to do: 1. What number comes next in the following series ? (12) 2, 4, 6, 8, 10 The numbers increase 2 at a time, therefore the number after 10 will be 12, and this number has been written in the brackets at the right. 2. Which word does not belong in this list? (a) green (b) violet (c) red (d) sweet (e) yellow (f) black (d) These are all colcurs except sweet, so d is written in the brackets. 3. Bird is to air as fish is to (a) water (b) swim (c) bait (d) net (e) catch (a) The answer is a, so this letter is written in the brackets. 4. ABCDEFGHIJKLMNOPDRSTUVWXYZ Print the letter before the sixth letter from the beginning of the ( E ) alphabet. The sixth letter from the beginning of the alphabet is F, and the the letter before it is E, so E has been written in the brackets. 5. Last Tuesday was April 19th. If next Trursday is three days away, (25) what day of the month is today? Today must be Monday, April 25th, so 25 has been written in the brackets. Now go ahead and try the following questions: 6. What number comes next in the following series ? ( ) 1, 10, 2, 20, 3, 30 7. Which word does not belong in this list ? (a) wood (b) iron (c) copper (d) lead (e) tin (f) aluminum ) ( 8. Snow is to winter as rain is to (a) water (b) umbrella (c) cloud (d) shower (e) summer ) ( ( ) 9. One third of one half is ? 10. A car is travelling at 60 m.p.h.. How long will it take to cover ) ( 240 miles ?

> The questions you have just done were practice questions. The questions in this test must be answered in the same way You will be given 35 minutes to do this test.

> > Ask no questions at all during the test.

DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO GO

1.	Black is to white as life is to (a) living (b) existence (c) death (d) illness (e) sickness	(	)
2.	Indicate the word that does not belong (a) ankle (b) leg (c) knee (d) collar (e) foot (f) toe	(	)
3.	Loat is to sea as car is to (a) hill (b) dale (c) town (d) road (e) garage	(	)
4.	Emulate means the same as (a) rival (b) fight (c) kill (d) imitate (e) wound	(	)
5.	A boy left home at 15 minutes past three o'clock, walking at 6 miles per hour. If he arrived at his destination at 35 minutes past four o'clock, what distance had he covered?	(	)
6.	Truant means the same as (a) divorcee (b) absentee (c) loser (d) winner (e) false	(	)
.7•	If 60 M.P.H. is equivalent to 88 feet per second, how fast must a car be travelling to cover 330 feet in five seconds?	(	)
8.	Print the letter in the word "surmountable" that is as far from the end as "T" is from the beginning	(	)
9.	Indicate the word that does not belong (a) water (b) milk (c) beer (d) wine (e) sugar (f) whisky	(	)
10.	Vaunt means the same as (a) taunt (b) hold (c) heave (d) have (e) boast	(	)
11.	January is to June as July is to	<b>(</b> )	)
12.	If the alphabet started at E instead of A, what would then be the seventeenth letter	(	}
13.	Bondage means the same as (a) punishment (b) slavery (c) imprisonment (d) trial (e) sentence	(	)
14.	If all the letters in the word "manly" were removed from the alphabet, what would then become the fifteenth letter?	(	)
15.	Precise means the same as (a) careful (b) exact (c) long (d) brief (e) light	(	)
16.	Print the sixth letter before the third letter after M in the alphabet.	<b>(</b> .	)
17.	Easy is to simple as machine is to (a) motor (b) part (c) gasoline (d) cylinder (e) fan	с. (с. а.	<b>)</b>
18.	Mystify means the same as (a) hide (b) lose (c) retain (d) puzzle (e) break	(	)
19.	What letter comes just as far after L in the alphabet as G comes after R in the word "chronological"	(	)
20.	Indicate the word that does not belong (a) pail (b) trail (c) plum (d) plan (e) plume (f) price	(	)
ຼີ 2 <b>1</b> .	Engine is to car as rib is to (a) lung (b) skeleton (c) brain (d) heart (e) leg	(	)
22.	How many cubic feet of water will fill a tank 6 ft. by $10\frac{1}{5}$ ft. by 11 ft.	(	)
23.	Duplicate means the same as (a) write (b) run (c) race (d) copy (e) walk	(	)
------------	--	--------------	------------------
24.	If today is Friday what was the third day before tomorrow	<b>(</b> )	) :
25.	What number comes next in the following series 3, 5, 9, 17	(	)
26.	If every sixth letter, namely F, L, etc., were left out of the alphabet, which letter would then become the fourteenth one?	(	)
27.	If the alphabet were reversed which letter would occupy the position that F does now?	(	)
28.	Drastic means the same as (a) violent (b) heavy (c) hard (d) soft (e) easy	(	)
29.	What number comes next in the following series 2, 3, 4, 9, 8	1 1 1	)
<b>30.</b>	Tall is to short as giant is to (a) elf (b) dwarf (c) monster (d) fairy (e) goblin		)
31.	A car is travelling a distance of 200 miles. If it covers the first half of the journey in 125 minutes and the second half in 115 minutes, what is its average speed for the journey?	. `	)
32.	Print the letter in the word "untouchable". That is as far from the beginning as T is from the end.	. (1	)
33.	Rake is to take as ride is to (a) rode (b) read (c) tide (d) talk (e) toll	( 1	)
34.	Wrest means the same as (a) turn (b) twist (c) twain (d) trouble (e) trace	(	)
35.	June is to November as February is to	(	)
36.	What number comes next in the following series 2, 7, 4, 4, 6	(	)
37.	A boy covers $\frac{1}{4}$ of his journey on foot; he rides a street car for 2/3 of his journey and then covers the final 2 miles of his journey on foot again. How long was his journey?	. <b>(</b> ,	)
38.	If the alphabet started at I instead of A, what would then be the eleventh letter?	. <b>(</b>	- <b>)</b> 4 512
<b>39.</b>	Indicate the word that does not belong (a) movie (b) producer (c) actor (d) script (e) watch (f) director	(	)
40.	Pulverize means the same as (a) crush (b) hit (c) beat (d) slap (e) push	(.	)
41.	May is to December as January is to	<b>(</b>	)
42.	What number comes next in the following series 1, 3, 5, 2, 4, 6	(	)
43.	If two cars ten miles apart are travelling towards one another at 40 and 10 M.P.H. respectively, how long will it be before they meet?	<b>(</b>	)

FORM 4

#### CANADIAN ARMY CLASSIFICATION TEST

FILL IN THE FOLLOWING PARTICULARS WHEN YOU ARE TOLD

Your first name	
Your last name	· · · · · · · · · · · · · · · · · · ·
Formal schooling	and and a second se
Centre	
Date	
Age in years	

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

a grad a strange and a strange of the strange of the

Read the following carefully:

- 1. This is a short test to find out how quickly and accurately you can answer a series of simple questions.
- 2. Some of the questions are easy. Others are hard. No one is expected to do everything, but do the best you can.
- 3. If you cannot do any question, leave it out and go on to the next. Return to it later if you have any time left.
- 4. When you finish one page go on to the next.
- 5. You may do any rough work or figuring at the sides of the pages if you wish.
- 6. The answers are to be written in the brackets at the right of the questions.

Here are some practice questions to show what you are expected to do:

- 1. What number comes next in the following series ?
  2, 4, 6, 8, 10 (12)
  The numbers increase 2 at a time, therefore the number after 10 will be 12, and this number has been written in the brackets at the right.
- 2. Which word does not belong in this list?
  (a) green (b) violet (c) red (d) sweet (e) yellow (f) black (d) These are all colcurs except sweet, so d is written in the brackets.
- 3. Bird is to air as fish is to (a) water (b) swim (c) bait (d) net (e) catch (a) The answer is a, so this letter is written in the brackets.
- 4. ABCDEFCHIJKIMNOPQRSTUVWXYZ Print the letter before the sixth letter from the beginning of the ( E ) alphabet. The sixth letter from the beginning of the alphabet is F, and the the letter before it is E, so E has been written in the brackets.
- 5. Last Tuesday was April 19th. If next Thursday is three days away, what day of the month is today? (25) Today must be Monday, April 25th, so 25 has been written in the brackets.

Now go ahead and try the following questions:

- 6. What number comes next in the following series ? 1, 10, 2, 20, 3, 30 ()
- 7. Which word does not belong in this list ? (a) wood (b) iron (c) copper (d) lead (e) tin (f) aluminum (

)

)

)

)

(

(

(

- 8. Snow is to winter as rain is to (a) water (b) umbrella (c) cloud (d) shower (e) summer
- 9. One third of one half is ?
- 10. A car is travelling at 60 m.p.h.. How long will it take to cover 240 miles ?

The questions you have just done were practice questions. The questions in this test must be answered in the same way You will be given 35 minutes to do this test.

Ask no questions at all during the test.

DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO SO

	3			
1.	Black is to white as good is to (a) indifferent (b) bad (c) charming (d) polite (e) virtuous		)	
2.	Engine is to car as trunk is to (a) tree (b) ground (c) earth (d) seed (e) plant	(	)	
3.	That number comes next in the following series 5, 3, 10, 7, 15	(	)	
4.	Indicate the word that does not belong (a) salary (b) wage (c) income (d) spend (e) payment (f) renumeration	(	)	
5.	Easy is to simple as water is to (a) level (b) liquid (c) pool (d) bowl (e) basin	(	)	
6.	Gaunt means the same as (a) poor (b) lean (c) tender (d) hard (e) soft	(	)	
7.	March is to September as October is to	(	)	
8.	If the alphabet were reversed which letter would occupy the position that G does now?	(	)	
9.	If all the letters in the word "mercy" were removed from the alphabet, what would then become the sixteenth letter?	(	)	
10.	Divert means the same as (a) many (b) most (c) deflect (d) push (e) tug	. (	)	
11.	What number comes next in the following series 3, 4, 5, 4, 5	(	)	
12.	A car is travelling a distance of 150 miles. If it covers the first half of the journey in 105 minutes and the second half in 75 minutes, what is its average speed for the journey?	(	)	
13.	Print the letter in the word "suspicious" that is as far from the beginning as P is from the end.	- <b>(</b>	)	
14.	What number comes next in the following series 3, 5, 10, 12, 24	(	)	
15.	Tall is to short as arrest is to (a) release (b) rest (c) hold (d) stop (e) relieve (f) imprison	(	)	~
16.	Abate means the same as (a) about (b) relieve (c) die down (d) increase (e) leave	(	)	
17.	How many cubic feet of water will fill a tank 5 ft. by 10 ft. by $12\frac{1}{2}$ ft.	(	)	
18.	Print the third letter before the tenth letter after E in the alphabet	(	)	
19.	Rake is to take as raid is to (a) tard (b) tird (c) tord (d) taid (e) tide	(	)	
20,	Overt means the same as (a) unconcealed (b) hidden (c) lost (d) traced (e) missing	(	)	
21.	January is to June as May is to	(	)	
22.	What number comes next in the following series 3, 3, 8, 2, 13	(	)	
			Ľ	

23.	A boy covers $1/3$ of his journey on foot; he rides a street car for $\frac{1}{2}$ of his journey and then covers the final 4 miles of his journey on foot again. How long was his journey?	(	)
24.	Quota means the same as (a) give (b) hold (c) part (d) receive (e) allowance	(	)
25.	If the alphabet started at I instead of A, what would then be the ninth letter?	(	)
26.	Indicate the word that does not belong (a) sponge (b) soap (c) bathroom (d) towel (e) nailbrush (f) facecloth	( )/	)
27.	Obscured means the same as (a) lost (b) hidden (c) found (d) traced (e) left	(	)
28.	If the fourth day before yesterday was Monday what day will it be tomorrow?	(	)
29.	What letter comes just as far after G in the alphabet as L comes after N in the word "sincerely"	(	)
30.	Tall is to short as giant is to (a) elf (b) dwarf (c) monster (d) fairy (e) goblin	(	)
31.	Emerge means the same as (a) issue (b) depart (c) leave (d) vacate (e) run	(	)
32.	What number comes next in the following series $1/48$ , $1/24$ , $1/12$	(	)
33.	A boy left home at 25 minutes past one o'clock, walking at 6 miles per hour. If he arrived at his destination at 15 minutes past two o'clock, what distance had he covered?	(	)
34.	Boat is to sea as snake is to (a) skin (b) ground (c) reptile (d) animal (e) snail	(	)
35•	If the alphabet were reversed which letter would occupy the position that P does now?	(	)
36.	Turbulent means the same as (a) heavy (b) soft (c) disturbed (d) eager (e) vain	(	)
37.	If 60 M.P.H. is equivalent to 88 feet per second, how fast must a car be travelling to cover 912 feet in six seconds?	(	)
38.	Link is to lank as file is to (a) fold (b) fele (c) fule (d) fale (e) feld	 (	)
39 •	Print the letter in the word "untenable". That is as far from the end as "B" is from the beginning	(	)
40.	Pulverize means the same as (a) crush (b) hit (c) beat (d) slap (e) push	(	)
41.	Indicate the word that does not belong -(a)-paper (b)-sheet (c) ball (d) board (e) card (f) envelope	(	)
42.	If two cars twelve miles apart are travelling towards one another at 65 and 25 M.P.H. respectively, how long will it be before they meet?	(	)

of Device Later And And And

43.	Simper means the same as (a) temper (b) anger (c) rage (d) smirk (e) scowl		(	)
44.	Print the fourth letter before the seventh letter after F in the alphabet		. (	·
45.	Defame means the same as (a) behead (b) slander (c) cut (d) rip (e) thread		(	)
46.	May is to December as December is to		(	)
47.	A man makes three purchases which amount to \$2.64. If the sum of the first and third purchases is half that of the second one, what is the amount of the second purchase.	1	(	)
48.	If the alphabet started at D instead of A, what would then be the thirteenth letter		(	)
49.	Indicate the word that does not belong (a) red (b) yellow (c) soft (d) blue (e) indigo (f) black		(	,) -
50.	Meal is to male as bear is to (a) bore (b) reab (c) rabe (d) bare (e) boar		(	)
51.	Tall is to short as work is to (a) hard (b) job (c) employer (d) easy (e) idleness (f) pleasure		(	· •
52.	If all the letters in the word "Great" were removed from the alphabet, what would then become the nineteenth letter?		Ç.	)
53.	Indicate the word that does not belong (a) false (b) hotel (c) girl (d) bus (e) clock (f) rat		(	.)
54.	What is the number three fifths of which is 27?		(	)
55.	Fotency means the same as (a) weakness (b) disease (c) illness (d) strength (e) touch		(	)
56.	One-fifth is to one-eleventh as 77 is to		(	)
57.	In a certain code MBSNLUJF means "Fulgency". Use this code to write Lung		(	)
58 <b>.</b>	What letter comes just as far after F in the alphabet as F comes after T in the word "Intensify"		(	)
59.	One-fifth is to one-seventh as 35 is to		(	)
60.	In a certain code KLWPSHAL means "Depilate". Use this code to write "Tide"		(	)
61.	Indicate the word that does not belong (a) trace (b) race (c) rough (d) reason (e) run (f) ride		(	)
62.	What number, when multiplied by itself, is 4 less than one fifth of 145		(	)
63.	Indicate the word that does not belong (a) day (b) dish (c) duck (d) luck (e) down (f) dirt		<u>,</u>	)
64.	One-half is to one-ninth as 27 is to		(	)
65.	What number comes next in the following series 7, 49, 8, 64, 9		(	)

66. Indicate the word that does not belong (a) ace (b) deuce (c) prince (d) king (e) Jack (f) Queen ( 27 In a certain code LUNYHCL means "Engrave". Use this 67. code to write Near 68. What number comes next in the following series 1/3, 2/5, 4/7, 7/9 ( 69. If every sixth letter, namely, F, L, etc., were left out of the alphabet which letter would then become the twelfth one? ( 70. Indicate the group that does not belong (a) ACD (b) RTU (c) NFQ (d) EHI (e) LNO (f) DFG ( 71. If the first of January is a Tuesday what day must the last day of the month be? ( 72. What number comes next in the following series 9, 1/3, 25, 1/5, 49 If today is the twelfth of the month and a Thursday 73. what day was the first of the month? ( A pie is cut so that one piece, which is one quarter 74. of the pie, is twice as large as each of the other pieces. Into how many pieces is the pie cut? (

75. Indicate the group that does not belong (a) 21 (b) 35 (c) 63 (d) 43 (e) 14 (f) 56.

IF YOU HAVE ANY TIME LEFT GO BACK AND CHECK YOUR ANSWERS

6

)

)

)

)

)

)

)

)

)

)

(

FORM 5

### CANADIAN ARMY CLASSIFICATION TEST

Your first nem	<b>e</b> <u>* </u>	
Your last mame		
Formal schooli	<b>B</b> B	
Centre		
Date		
Age in years _		

e. 1

FILL IN THE FOLLOWING PARTICULARS WHEN YOU ARE TOLD

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

ad the following carefully:

- 1. This is a short test to find out how quickly and accurately you can answer a series of simple questions.
- 2. Some of the questions are easy. Others are hard. No one is expected to do everything, but do the best you can.
  - 3. If you cannot do any question, leave it out and go on to the next. Return to it later if you have any time left.
  - 4. When you finish one page go on to the next.
  - 5. You may do any rough work or figuring at the sides of the pages if you wish.
  - 6. The answers are to be written in the brackets at the right of the questions.

Here are some practice questions to show what you are expected to do:

- What number comes next in the following series ?

   4, 6, 8, 10
   The numbers increase 2 at a time, therefore the number after 10 will be 12, and this number has been written in the brackets at the right.
- 2. Which word does not belong in this list?
  (a) green (b) violet (c) red (d) sweet (e) yellow (f) black (d)
  These are all colours except sweet, so d is written in the brackets.
- 3. Bird is to air as fish is to
  (a) water (b) swim (c) bait (d) net (e) catch
  (a) The answer is a, so this letter is written in the brackets.
- 4. ABCDEFGHIJKLMNOPQRSTUVWXYZ Print the letter before the sixth letter from the beginning of the (E) alphabet. The sixth letter from the beginning of the alphabet is F, and the the letter before it is E, so E has been written in the brackets.
- 5. Last Tuesday was April 19th. If next Thursday is three days away,
   what day of the month is today? (25)
   Today must be Monday, April 25th, so 25 has been written in the brackets.

Now go ahead and try the following questions:

- 6. What number comes next in the following series ? ( ) 1, 10, 2, 20, 3, 30
- 7. Which word does not belong in this list ? (a) wood (b) iron (c) copper (d) lead (e) tin (f) aluminum ( )
- 8. Snow is to winter as rain is to (a) water (b) umbrella (c) cloud (d) shower (e) summer (
- 9. One third of one half is ?
- 10. A car is travelling at 60 m.p.h.. How long will it take to cover (240 miles ?

The questions you have just done were practice questions. The questions in this test must be answered in the same way You will be given 35 minutes to do this test. )

)

)

Ask no questions at all during the test.

DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO SO

	3		
T.	Tall is to short as even is to (a) equal (b) more (c) (less (d) odd (e) umequal	. (	· )
2.	Indicate the word that does not belong (a) propellor (b) engine (c) wing (d) fuselage (e) tail (f) air		1_
•		(	,
₀و	(a) water (b) co coon (c) air (d) tree (e) shrub	(	)
4.	Elude means the same as (a) pursue (b) escape (c) chase (d) fetch (e) walk	. (	)
5.	What number comes next in the following series 9, 11, 10, 12	(	)
6.	A boy left home at 25 minutes past two o'clock, walking at 4 miles per hour. If he arrived at his destination at 40 minutes past three o'clock, what distance had he covered?		)
7.	If the alphabet were reversed which let ter would occupy the position that Q does now?	(	)
8.	Turmoil means the same as (a) rush (b) leave (c) come (d) agitation (e) hope	(	• )
9.	Easy is to simple as letter is to (a) writing (b) drawing (c) epistle (d) picture (e) sketch	(	)
10.	What number comes next in the following series $\frac{1}{2}$ , 2/3, $\frac{3}{4}$	(	, ,
11.	If 60 M.P.H. is equivalent to 88 feet per second, how fast must a car be travelling to cover 264 feet in four seconds?	(	)
12.	Print the letter in the word "Electrifying" that is as far from the end as "Y" is from the beginning	(	)
13.	Squalid means the same as (a) dirty (b) clean (c) healthy (d) sick (e) ill	(	)
14.	March is to September as August is to	(	)
15.	A man makes three purchases which amount to \$3.21. If the' sum of the first and third purchases is half that of the second one, what is the amount of the second purchase?	(	)
16.	If the alphabet started at D instead of A, what would then be the tenth letter?	(	)
17.	Tall is to short as feeble is to (a) simple (b) homest (c) unhappy (d) strong (e) nice (f) weak	. (	)
18.	If all the letters in the word "Stain" were removed from the alphabet, what would then become the seventeenth letter?	(	)
19.	Indicate the word that does not belong (a) cost (b) silly (c) bag (d) photograph (e) dress (f) for	(	)
20.	Portent means the same as (a) view (b) look (c) sign (d) watch (e) leave	• (	)
21.	Print the fifth letter before the eighth letter after B in the alphabet.	(	)

	22.	What letter comes just as far after T in the alphabet as 1 comes after T in the word "Synthesis"		(	)
B	23.	Indicate the word that does not belong (a) full (b) flame (c) blame (d) fashion (e) find (f) four	<b>1</b>	(	)
	24.	Officulate means the same as (a) touch (b) push (c) kiss (d) pull (e) kick		(	)
	25.	What number comes next in the following series 5, 6, 10, 11, 15		(	)
	26.	What letter comes just as far after R in the alphabet as Y comes after B in the word "possibility"		(	)
	27.	Indicate the word that does not belong (a) save (b) sin (c) sound (d) sack (e) sad (f) bad		(	)
	28.	Engine is to car as room is to (a) window (b) floor (c) house (d) road (e) shape		(	)
	29.	Indicate the word that does not belong (a) wheel (b) saucer (c) cent (d) postcard (e) moon (f) disc		(	)
	30.	Tall is to short as giant is to (a) elf (b) dwarf (c) monster (d) fairy (e) goblin		(	)
	31.	Faction is the same as (a) whole (b) same (c) party (d) all (e) none		• (	)
	32.	What number comes next in the following series $1/3$ , $2/9$ , $3/27$		ĺ	)
	33.	If every fifth letter, namely E, J, etc., were left out of the alphabet, which letter would then become the twelfth one?		18 (	,
···	34.	Link is to lank as dile is to $(a)$ dole $(b)$ dole $(c)$ due		N.	)
	35.	If the alphabet were reversed which letter would occupy			
	36.	the position that H does now? Stationary means the same as			)
	37.	(a) paper (b) writing (c) pad (d) book (e) still What number comes next in the following series		(	)
		8, 9, 12, 13	، يغر	(	)
	38.	A car is travelling a distance of 180 miles. If it covers the first half of the journey in 140 minutes and the second half in 100 minutes, what is its average speed for the journey?		(	)
	39.	Print the letter in the word "Sagacious" that is as far from the beginning as G is from the end		<b>(</b> .	)
	40.	Pulverize means the same as (a) crush (b) hit (c) beat (d) slap (e) push		(	)
	41.	Rake is to take as roll is to (a) tale (b) toll (c) tell (d) tall (e) talk		(	)
	42.	What number comes next in the following series $2, 2/4, 3, 3/9, 4$		(	)

43. May is to December as October is to ) What number comes next in the following series 44. 6, 11, 8, 7, 10 ( ) A boy covers 1/6 of his journey on foot; he rides a 45。 streetcar for  $\frac{3}{4}$  of his journey and then covers the final 12 miles of his journey on foot again. How long was his journey? ( ) If the alphabet started at M instead of A, what would then 46. be the seventh letter Indicate the word that does not belong 47. (a) bridge (b) poker (c) rummy (d) checkers (e) pontoon (f) chemin-de-fer ) ( 48. Pariah means the same as (a) tame (b) tiger (c) lion (d) outcast (e) wild ſ ) April is to August as December is to ) 49. 50. Meal is to Male as Bear is to (a) bore (b) reab (c) rabe (d) bare (e) boar What anmber comes next in the following series 51. } 5, 10, 15, 12, 17, 22 52. If two cars fifteen miles apart are travelling towards one another at 80 and 70 M.P.H. respectively, how long will ) it be before they meet? If all the letters in the word "Since" were removed from the 53. alphabet, what would then become the fifteenth letter ) Indicate the word that does not belong 54。 (a) fear (b) anger (c) jealousy (d) beauty (e) hate (f) envy ) Tall is to short as advance is to 55. (a) soldiers (b) advantage (c) entrance (d) retire (e) contrive ) (f) abandon Blemish means the same as 56。 (a) colour (b) tan (c) spot (d) shade (e) clear ) How many cubic feet of water will fill a tank  $4\frac{1}{2}$  ft. by 57. ) 8 ft. by 10 ft. Print the fourth letter before the eighth letter after 58. ) L in the alphabet Indicate the word that does not belong 59. (a) baseball (b) golf (c) billiards (d) football (e) hockey ) (f) tennis In a certain code KLWPSHAL means "Depilate". Use this code 60. ) to write "Tide" Odious means the same as 61. (a) loud (b) distant (c) near (d) distasteful (e) soft ( ) 62. If today was the twelfth of the month and a Monday what day ) was the first of the month ) One seventh is to one-tenth as 40 is to 63.

64.	If today is the twelfth of the month and a Friday what day , was the first of the month	(	, ,
65.	In a certain code OAZHQDSQ means "Converge". Use this code to write Green		÷.)
<sup>`</sup> 66 .	What number, when multiplied by itself, is 13 less than one-sixth of 132	, .	)
67.	One-fourth is to one-seventh as 42 is to	(	)
<u>6</u> 8.	Coagulate means the same as (a) clot (b) stop (c) stick (d) touch (e) run	(	)
69.	What is the number two elevenths of which is 18	(	)
70.	Indicate the group that does not belong (a) ACD (b) RTU (c) NPQ (d) EHI (e) LNO (f) DFG	;	)
71.	One-fourth is to one-thirteenth as 52 is to	(	)
72.	In a certain code OAXXMBEQ means "Collapse". Use this code to write Slop	(	)
73.	Indicate the group that does not belong (a) 12 (b) 30 (c) 33 (d) 42 (e) 54 (f) 18	(	)
74.	A pie is cut so that one piece, which is one-sixth of the pie, is twice as large as each of the other pieces. Into how many pieces is the pie cut?	· · · · · · · · · · · · · · · · · · ·	)
<b>7</b> 5 •	If today is Thursday and there are ten more days to go in the month what will the last day of the month be?	(	)

ţ;

IF YOU HAVE ANY TIME LEFT GO BACK AND CHECK YOUR ANSWERS

FORM 6

## CANADIAN ARMY CLASSIFICATION TEST

the state of the state of the state of

FILL IN THE FOLLOWING PARTICULARS WHEN YOU ARE TOLD

Your first name
Your last mame
Formal schooling
Centre
Date
Age in years

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

ead the following carefully:

- 1. This is a short test to find out how quickly and accurately you can answer a series of simple questions.
- 2. Some of the questions are easy. Others are hard. No one is expected to do everything, but do the best you can.
- 3. If you cannot do any question, leave it out and go on to the next. Return to it later if you have any time left.
- 4. When you finish one page go on to the next.
- 5. You may do any rough work or figuring at the sides of the pages if you wish.
- 6. The answers are to be written in the brackets at the right of the questions.

Here are some practice questions to show what you are expected to do:

- 1. What number comes next in the following series ?
  2, 4, 6, 8, 10
  (12)
  The numbers increase 2 at a time, therefore the number after 10 will be 12, and this number has been written in the brackets at the right.
- 2. Which word does not belong in this list?
  (a) green (b) violet (c) red (d) sweet (e) yellow (f) black (d) These are all colours except sweet, so d is written in the brackets.
- 3. Bird is to air as fish is to (a) water (b) swim (c) bait (d) not (e) catch (a) The answer is a, so this letter is written in the brackets.
- 4. ABCDEFGHIJKIMNOPQRSTUVWXYZ Print the letter before the sixth letter from the beginning of the ( E ) alphabet. The sixth letter from the beginning of the alphabet is F, and the the letter before it is E, so E has been written in the brackets.
- 5. Last Tuesday was April 19th. If next Thursday is three days away, what day of the month is today? (25)
   Today must be Monday, April 25th, so 25 has been written in the brackets.

ſ

ĺ

)

)

)

)

)

Now go shead and try the following questions:

- 6. What rumber comes next in the following series ? 1, 10, 2, 20, 3, 30
- 7. Which word does not belong in this list ? (a) wood (b) iron (c) copper (d) lead (e) tin (f) aluminum (
- 8. Snow is to winter as rain is to (a) water (b) umbrella (c) cloud (d) shower (e) summer
- 9. One third of one half is ?
- 10. A car is travelling at 60 m.p.h.. How long will it take to cover 240 miles ?

The questions you have just done were practice questions. The questions in this test must be answered in the same way You will be given 35 minutes to do this test.

Ask no questions at all during the test.

DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO SO

	3		
l.	Easy is to simple as large is to (a) small (b) little (c) big (d) medium (e) timy	(	)
2.	Eliminate means the same as (a) leave (b) remove (c) touch (d) hold (e) push	(	)
3.	Indicate the word that does not belong (a) Chinese (b) English (c) French (d) German (e) dialect (f) Spanish	(	)
4.	What number comes next in the following series 2, 4, 8, 16	.(	)
5.	Engine is to car as heart is to (a) man (b) body (c) brain (d) eye (e) vein	(	)
6.	Exclude is the same as (a) gather (b) hold (c) omit (d) notice (e) leave	(	)
7.	What number comes next in the following series 8, 4, 2, 1, $\frac{1}{2}$	. (	)
8.	If every fifth letter, mamely E, J, etc., were left out of the alphabet, which letter would them become the eighth one	(	)
. 9.	Tall is to short as ugly is to (a) beautiful (b) hideous (c) plaim (d) gracious (e) vaim	(	)
10.	If the alphabet were reversed which letter would occupy the position that I does now	(	)
11.	Scorm means the same as (a) anger (b) pity (c) love (d) contempt (e) ire	(	.)
12.	A car is travelling a distance of 160 miles. If it covers the first half of the journey in 130 minutes and the second half in 110 minutes, what is its average speed for the journey?	(	)
13.	Print the letter in the word "Surrounding". That is as far from the beginning as 0 is from the end	(	)
14.	Nefarious means the same as (a) wicked (b) various (c) spurious (d) good (e) long	(	)
15.	March is to September as June is to	(	)
16.	Left number comes next in the following series 1, $1/3$ , $1/9$ , 4, $4/3$	(	)
17,	A boy covers 1/5 of his journey on foot; he rides a streetcar for 2/3 of his journey and then covers the final 2 miles of his journey on foot again. How long was his journey?	(	)
18.	If the alphabet started at M instead of A, what would then be the ninth letter	(	)
19.	Impromptu means the same as (a) expedient (b) speech (c) prompted (d) tardy (e) extempore	(	)
20.	February is to June as October is to	(	)
21.	What number comes next in the following series 8, 11, 16, 9, 12	<b>(</b>	)
L			

22.	If two cars ten miles apart are travelling towards one anothe at 10 and 30 M.P.H. respectively, how long will it be before they meet?	)r	(	)
23.	If all the letters in the word "Power" were removed from the alphabet, what would then become the fifteenth letter?		(	)
24.	Indicate the word that does not belong (a) coat (b) hat (c) suit (d) shirt (e) umbrella (f) sock	, E	(	)
25.	Tall is to short as extend is to (a) tend (b) descend (c) pull (d) extract (e) contract (f) expand		(	)
26.	Bias means the same as (a) steep (b) slant (c) high (d) low (e) medium		(	)
27.	How many cubic feet of water will fill a tank 6 ft. by $9\frac{1}{2}$ ft. by 11 ft.		(	)
28.	Print the tenth letter before the sixth letter after Q in the alphabet		(	)
29.	Indicate the word that does not belong (a) psychology (b) sociology (c) physics (d) sculpture (e) mathematics (f) chemistry		(	)
30.	Tall is to short as giant is to (a) elf (b) dwarf (c) monster (d) fairy (e) goblin	r.	(	)
31.	Onus means the same as (a) only (b) single (c) alone (d) burden (c) simple	a ya	(	)
32.	Boat is to sea as fish is to (a) bowl (b) water (c) air (d) fin (e) animal-		(	)
33.	A boy left home at 45 minutes past one o'clock, walking at 3 miles per hour. If he arrived at his destination at 15 minutes past three o'clock, what distance had he covered?		(	)
34.	Tall is to short as genuine is to (a) rough (b) ingenious (c) weak (d) foreign (e) false (f) dismal	21.1	(	)
35 •	Speculate means the same as (a) speak (b) say (c) talk (d) ponder (e) state		. (	)
36.	If the alphabet were reversed which letter would occupy the position that R does now		(	)
37 •	Twirl means the same as (a) span (b) spin (c) spun (d) sponge (e) speed		(	)
. 38 .	What number comes next in the following series 12, 14, 18, 14, 16		. (	)
39.	If 60 M.P.H. is equivalent to 88 feet per second, how fast must a car be travelling to cover 396 feet in three seconds	19 <b>46)</b> 1. 1. 1946) – 1 <sup>°</sup> 1. 1. 1946) – 1 <sup>°</sup>	(	) ter vis a transm
40.	Pulverize means the same as (a) crush (b) hit (c) beat (d) slap (e) push		(	)
41.	Print the letter in the word "Discrimination" that is as far from the end as "A" is from the beginning	2.4	<b>(</b> 	)

. 4

42.	Indicate the word that does not belong (a) star (b) planet (c) lamp (d) sun (e) moon (f) comet		(	)
43.	Squeamish means the same as (a) rough (b) rude (c) brutal (d) fastidious (e) polite		(	)
44.	April is to August as October is to		(	)
45.	A man makes three purchases which amount to \$2.70. If the sum of the first and third purchases is half that of the second one, what is the amount of the second purchase?		(	)
46.	If the alphabet started at H instead of A, what would then be the twelfth letter		(	)
47.	Indicate the word that does not belong (a) ant (b) wasp (c) snake (d) bee (e) fly (f) mosquito		) (	)
48.	Naive means the same as (a) sophisticated (b) naked (c) simple (d) villainous (e) difficult		(	)
49.	If all the letters in the word "Proud" were removed from the alphabet, what would then become the sixteenth letter		( (	)
50.	Meal is to male as Bear is to (g) bore (b) reab (c) rabe (d) bare (e) boar		(	)
51.	Indicate the word that does not belong (a) chair (b) plan (c) car (d) submarine (e) hard (f) lamp	,	(	)
52.	Print the fourth letter before the ninth letter after L in the alphabet		(	)
53.	What letter comes just as far after H in the alphabet as V comes after N in the word "Endeavour"		(	)
54.	What is the number three sevenths of which is 39		(	)
55.	Indicate the word that does not belong (a) grace (b) race (c) ground (d) brief (e) gain (f) get		(	)
56.	If the day after tomorrow is Thursday then the day before yesterday was		(	)
57。	What number comes next in the following series 7, 8, 8, 9, 9, 10		(	)
58.	One-third is to one-tenth as 50 is to	34	(	)
59.	What number comes next in the following series 3, $2/3$ , 5, $3/5$ , 7		(	)
60,	In a certain code KLWPSHAL means "Depilate"。 Use this code to write "Tide"		(	)
61.	What letter comes just as far after L in the alphabet as M comes after F in the word "refreshment"	••	(	)
62.	Rake is to take as Rind is to (a) tind (b) tond (c) tawd (d) tend (e) tire		(	)
63.	In a certain code LYWFUCG means "Reclaim". Use this code to write Realm		(	)
64.	Wr 5 number comes next in the following series 2, 4, 4, 16, 5		(	)

65.	Link is to lank as Bile is to (a) bald (b) bild (c) bale (d) bold (e) bear	(	١
66.	If the first of January is a Wednesday what day must the	1	,
	last day of the month be	(	)
67.	What number, when multiplied by itself, is 6 less than		
	one seventh of 154	<b>(</b> _*	)
68.	Indicate the word that does not belong		
	(a) tough (b) tack (c) touch (d) test (e) best (f) take	(	)
69.	One-sixth is to one-thirteenth as 65 is to	(	)
70.	Indicate the group that does not belong		
•	(a) ACD (b) RTU (c) NPQ (d) EHI (e) LNO (f) DFG	(	)
71。	In a certain code VLYUXNB means "Breadth". Use this code		
• - •	to write Hear	(	)
72.	If the first of January is a Saturday what day must the last		
•	day of the month be	<b>(</b>	)
73.	One-third is to one-fifth as 20 is to	(	)
74.	A pie is cut so that one piece, which is one-seventh of the		
	Into how many pieces is the pie cut?	. (	`)
75.	indicate the group that does not belong		
	(a) 51 (b) 35 (c) 15 (d) 30 (o) 65 (f) 40.	(	)

IF YOU HAVE ANY TIME LEFT GO BACK AND CHECK YOUR ANSWERS

CANADIAN ARMY CLASSIFICATION TEST

# FILL IN THE FOLLOWING PARTICULARS WHEN YOU ARE TOLD

Your first name	
Your lest neme	
Formal schooling _	
Centre	
Date	
Age in years	

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

FORM 7

lead the following carefully:

1. This is a short test to find out how quickly and accurately you can answer a series of simple questions. 2. Some of the questions are easy. Others are hard. No one is expected to do everything, but do the best you can. 3. If you cannot do any question, leave it out and go on to the next. Return to it later if you have any time left. 4. When you finish one page go on to the next. 5. You may do any rough work or figuring at the sides of the pages if you wish. 6. The answers are to be written in the brackets at the right of the questions. Here are some practice questions to show what you are expected to do: 1. What number comes next in the following series ? (12) 2, 4, 6, 8, 10 The numbers increase 2 at a time, therefore the number after 10 will be 12, and this number has been written in the brackets at the right. 2. Which word does not belong in this list? (a) green (b) violet (c) red (d) sweet (e) yellow (2) black (d) These are all colcurs except sweet, so d is written in the brackets. 3. Bird is to air as fish is to (a) water (b) swim (c) bait (d) not (e) catch (a) The answer is a, so this letter is written in the brackets. 4. ABCDEFGHIJKLMNOPQRSTUVWXYZ Print the letter before the sixth letter from the beginning of the ( E ) alphabet. The sixth letter from the beginning of the alphabet is F, and the the letter before it is E, so E has been written in the brackets. 5. Last Tuesday was April 19th. If next Thursday is three days away, what day of the month is today? (25) Today must be Monday, April 25th, so 25 has been written in the brackets. Now go shead and try the following questions: 6. What number comes next in the following series ? ( ) 1, 10, 2, 20, 3, 30 7. Which word does not belong in this list ? (a) wood (b) iron (c) copper (d) lead (e) tin (f) aluminum ) ( 8. Snow is to winter as rain is to (a) water (b) umbrella (c) cloud (d) shower (e) summer ( ) ( ) 9. One third of one half is ? 10. A car is travelling at 60 m.p.h.. How long will it take to cover ( ) 240 miles ?

> The questions you have just done were practice questions. The questions in this test must be answered in the same way You will be given 35 minutes to do this test.

> > Ask no questions at all during the test.

DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO SO

1.	Tall is to short as high is to (a) low (b) small (c) depth (d) little (e) wide		(	)
2.	Condone means the same as (a) refuse (b) leave (c) allow (d) give (e) love		(	)
>3.	Tell is to short as detain is to (a) release (b) invent (c) retain (d) date (e) contain (f) esteem		(	)
4.	lndicate the word that does not belong (a) donkey (b) cow (c) horse (d) cat (e) snake (f) mouse		ţ	)
5.	Hawser means the same as (a) ladder (b) rope (c) string (d) bench (e) seat		(	),
6.	April is to August as August is to		(	)
7.	Print the letter in the word "Omnipotent". That is as far from the beginning as I is from the end	ι.	• (	)
8.	Mobile means the same as (a) mainly (b) movable (c) moral (d) must (e) more		(	ì
9.	If the alphabet were reversed which letter would occupy the position that J does now		(	)
10.	What letter comes just as far after 6 in the alphabet as N comes after M in the word "Accomodation"		(	)
11.	How many cubic feet of water will fill a tank 5 ft. by 8 ft. by $12\frac{1}{2}$ ft.		( ·	)
12.	What number comes next in the following series 1, 2, 1, 3, 1		(	)
13.	If 60 M.P.H. is equivalent to 88 feet per second, how fast must a car be travelling to cover 440 feet in four seconds		(	)
14.	If the alphabet started at H instead of A, what would then be the fourteenth letter		(	)
15.	Onerous means the same as (a) light (b) soft (c) heavy (d) sharp (e) dark		(	)
16.	What number comes next in the following series 6, 10, 8, 8, 10		(	)
17.	If all the letters in the word "Solid" were removed from the alphabet, what would then become the fifteenth letter		(	)
18.	Rake is to take as real is to (a) tale (b) talk (c) tide (d) teal (e) tael		(	)
19.	Allege means the same as (a) speak (b) word (c) touch (d) imply (e) run		(	)
20.	If today is Friday what was the seventh day before tomorrow		(	• )•
21.	Attain means the same as (a) come (b) go (c) leave (d) reach (e) run		(	)
22.	What number comes next in the following series 3, 9, 4, 16, 5		(	)

	4		
23.	A car is travelling a distance of 150 miles. If it covers the first half of the journey in 170 minutes and the second half in 130 minutes, what is its average speed for the journey?	(	)
24.	If the alphabet started at L instead of A, what would then be the eighth letter		
25.	Easy is to simple as rage is to (a) emotion (b) hate (c) love (d) anger (c) polite	(	)
26.	A man makes three purchases which amount to \$1.56. If the sum of the first and third purchases is half that of the second one, what is the amount of the second purchase?	(	)
27.	Element means the same as (a) part (b) whole (c) entirety (d) none (e) total	(	)
28.	What number comes next in the following series 6, 16, 14, 12, 20	(	)
29.	Upbraid means the same as (a) braid (b) state (c) ask (d) chide (e) tell	(	)
30.	Tall is to short as giant is to (a) elf (h) dwarf (c) monster (d) fairy (e) goblin	(	)
31.	February is to June as August is to	(	)
32.	What letter comes just as far after C in the alphabet as L comes after D in the word "In Describable"	(	)
33.	If the alphabet were reversed which letter would occupy the position that S does now	.(	)
34.	Status means the same as (a) country (b) province (c) position (d) leave (e) continent	(	,)
35.	What number comes next in the following series 15, 2, 20, 4, 25	(	)
36.	A boy left home at 50 minutes past two o'clock, walking at 6 miles per hour. If he arrived at his destination at 10 minutes past four o'clock, what distance had he covered?	(	)
37。	Print the letter in the word "Indifferent" that is as far from the end as "R" is from the beginning	<b>, (</b>	)
38.	Boat is to sea as train is to (a) track (b) station (c) signal (d) coach (e) bus	(	)
<b>39</b> •	Engine is to car as bore is to (a) bare (b) rifle (c) bullet (d) gunpowder (e) explosive	(	)
40.	Pulverize means the same as (a) crush (b) hit (c) beat (d) slap (e) push	(	•)
41.	Indicate the word that does not belong (a) sardine (b) salmon (c) whale (d) shark (e) trout (f) halibut	(	)
42.	If the day after tomorrow is Monday then the day before yesterday was	(	)
<b>43</b> .	What number comes next in the following series 1.15, 1.50, 1.85	(	)

.

-

•

		5			
	44.	A boy covers $\frac{1}{4}$ of his journey on foot; he rides a streetcar for 3/5 of his journey and then covers the final 3 miles of his journey on foot again. How long was his journey?	(	)	
Ľ	45.	Aroma means the same as (a)-acid_(b)-sour_(c)-cdour_(d)-rancid (e)_oily	_(	)_	
~	46.	If all the letters in the word "Trump" were removed from the alphabet, what would then become the nineteenth letter	(	)	
	47• '	Indicate the word that does not belong (a) urge (b) under (c) urn (d) turn (e) use (f) utilize	(	)	
	48.	Tall is to short as uneven is to (a) evening (b) regular (c) endless (d) ordinary (e) important (f) never	(	)	
	49.	Despoil is the same as (a) push (b) plunder (c) steal (d) touch (e) hold	(	)	
•	50.	Meal is to male as bear is to (a) bore (b) reab (c) rabe (d) bare (e) boar	(	)	
	51.	What number comes next in the following series 6, 16, 4, 15, 2	(	)	
	52.	(a) pale (b) pole (c) pule (d) paid (e) pant	(	)	
	53.	Indicate the word that does not belong (a) lair (b) hair (c) here (d) how (e) have (f) hold	(	)	
	54.	If two cars five miles apart are travelling towards one another at 25 and 35 M.P.H. respectively, how long will it be before they meet?	(	)	
	55•	Print the fifth letter before the seventh letter after C in the alphabet	(	)	
	56.	Indicate the word that does not belong (a) rain (b) fog (c) wind (d) hail (e) snow (f) mist	(	)	
	57。	Indicate the word that does not belong (a) bay (b) inlet (c) delta (d) tributary (e) mouth (f) cove	(	)	
	58.	One-half is to one-fifth as 30 is to	(	)	
	59.	Indicate the word that does not belong (a) rug (b) book (c) warm (d) picture (e) bulb (f) tray	(	}	
	60.	In a certain code KLWPSHAL means "Depilate". Use this code to write "Tide"	(	, ,	
	61.	Print the seventh letter before the third letter after S in the alphabet	(	)	
	62.	What is the number two thirteenths of which is 12	(	)	
	63.	Indicate the word that does not belong (a) sour (b) bright (c) bitter (d) acid (e) sweet (f) sharp	(	)	
	64.	If every fourth letter, namely D, H, etc, were left out of the alphabet, which letter would then become the thirteenth one?	(	)	
	65.	One-fifth is to one-eighth as 48 is to	(	)	

66.	June is to November as May is to		(	)
67.	What number comes next in the following series 3, $\frac{1}{2}$ , 5, $\frac{1}{4}$ , 7		(	)
68.	In a certain code IZAPCHS means "Estival". Use this code	منارحة كريم معرز		
	to write Late		(	)
69.	If today is Saturday and there are ten more days to go			
	in the month what will the last day of the month be		(	)
70	Indicate the amoun that does not bolong			
10.	(a) ACD (b) RTU (c) NPQ (d) EHI (e) LNO (f) DFG		(	)
~ `				
71.	In a certain code KPYLMBS means "Direful". Use this code to write Lure		(	)
				-
72.	What number, when multiplied by itself, is 6 less than		,	١,
			1	)
73.	One-half is to one-eleventh as 33 is to		(	)
74.	A pie is cut so that one piece, which is one-eighth of the	pie.		
0.4	is twice as large as each of the other pieces. Into how			
	many pieces is the pie cut?		(	)
75.	Indicate the group that does not belong			
	(a) 16 (b) 44 (c) 52 (d) 62 (e) 36 (f) 12		(	)

IF YOU HAVE ANY TIME LEFT GO BACK AND CHECK YOUR ANSWERS

FORM 8

### CANADIAN ARMY CLASSIFICATION TEST

FILL IN THE	FOLLOWING	PARTICULARS	WHEN	YOU ARE	TOLD
• •					
Your first name			-	x	,
Your last name			-		
Formal schooling			-		
Centre		1	<b>.</b>		
Date					

Age in years \_\_\_\_\_

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

Read the following carefully:

- 1. This is a short test to find out how quickly and accurately you can answer a series of simple questions.
- 2. Some of the questions are easy. Others are hard. No one is expected to do everything, but do the best you can.
- 3. If you cannot do any question, leave it out and go on to the next. Return to it later if you have any time left.
- 4. When you finish one page go on to the next.
- 5. You may do any rough work or figuring at the sides of the pages if you wish.
- 6. The answers are to be writter in the brackets at the right of the questions.

Here are some practice questions to show what you are expected to do:

- 1. What number comes next in the following series ? 2, 4, 6, 8, 10 The numbers increase 2 at a time, therefore the number after 10 will be 12, and this number has been written in the brackets at the right.
- 2. Which word does not belong in this list? (a) green (b) violet (c) red (d) sweet (e) yellow (f) black (d) These are all colcurs except sweet, so d is written in the brackets.
- 3. Bird is to air as fish is to (a) water (b) swim (c) bait (d) not (e) catch The answer is a, so this letter is written in the brackets.
- ABCDEFGHIJKIMNOPQRSTUVWXYZ Print the letter before the sixth letter from the beginning of the (E) alphabet. The sixth letter from the beginning of the alphabet is F, and the the letter before it is E, so E has been written in the brackets.
- 5. Last Tuesday was April 19th. If next Thursday is three days away, what day of the month is today? (25) Today must be Monday, April 25th, so 25 has been written in the brackets.

Now go shead and try the following questions:

- 6. What number comes next in the following series ? 1, 10, 2, 20, 3, 30 ()
- 7. Which word does not belong in this list ? (a) wood (b) iron (c) copper (d) load (e) tin (f) aluminum ( )
- 8. Snow is to winter as rain is to (a) water (b) umbrella (c) cloud (d) shower (e) summer (

9. One third of one half is ?

10. A car is travelling at 60 m.p.h.. How long will it take to cover (240 miles ?

The questions you have just done were practice questions. The questions in this test must be answered in the same way You will be given 35 minutes to do this test. )

)

)

Ask no questions at all during the test.

DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO SO

a an Le	З.		
1.	Black is to white as long is to (a) tall (b) short (c) wide (d) thick (a) parrow	,	
2.	Sumptuous means the same as (a) dirty (b) high (c) long (d) easy (a) costly		) 
3.	June is to November as March is to		)
4.	Indicate the word that does not belong		1
•	(a) ball (b) wheel (c) moon (d) cloud (e) circle (f) sphere.	<b>(</b>	)
	(a) wordy (b) lengthy (c) short (d) tired (e) easy	(	)
6.	If the alphabet were reversed which letter would occupy the position that T does now	(	)
7.	Boat is to sea as aeroplane is to (a) aerodrome (b) pilot (c) engine (d) air (e) land	(	)
8.	Dwindle means the same as (a) grow (b) vanish (c) lose (d) shrink (e) leave	. (	)
9.	A boy left home at 5 minutes past three o'clock, walking at 5 miles per hour. If he arrived at his destination at 17 minutes past four o'clock, what distance had he covered?	(	)
10.	If 60 M.P.H. is equivalent to 88 feet per second, how fast must a car be travelling to cover 528 feet in three seconds?		)
11.	Print the letter in the word "Mediocrity" that is as far from the end as "C" is from the beginning	(	)
12.	What number comes next in the following series 4, $2/3$ , 5, $\frac{3}{4}$ , 6	(	)
13.	A man makes three purchases which amount to \$4.02. If the sum of the first and third purchases is half that of the second one, what is the amount of the second purchase?	(	)
14.	If the alphabet started at G instead of A, what would then be the tenth letter	(	)
15.	Indicate the word which does not belong (a) live (b) dead (c) ill (d) sick (e) life (f) ailing	(	)
16.	Indicate the word that does not belong (a) region (b) area (c) distance (d) locality (e) district (f) surroundings	(	)
17.	Bequeath means the same as (a) run (b) leave (c) offer (d) wonder (e) look	(	)
18.	If all the letters in the word "Rough" were removed from the alphabet, what would then become the sixteenth letter?	(	)
19.	Indicate the word that does not belong (a) pen (b) orange (c) stove (d) chair (e) large (f) door	(	)
. 20	Comprise means the same as (a) detail (b) include (c) tell (d) say (e) speak	(	)
21.	Print the ninth letter before the fourth letter after N in the alphabet	(	)
22.	Easy is to simple as difficult is to (a) arduous (b) plain (c) plane (d) plan (e) plight	(	)

,

	· · · · · · · · · · · · · · · · · · ·		
23.	Gratis means the same as (a) free (b) expensive (c) cheap (d) annoy (e) touch	(	)
24.	What number comes next in the following series 9, 8, 11, 10, 13	(	)
25.	What letter comes just as far after J in the alphabet as E comes after G in the word "Ingratitude"	(	)
26 .	Engine is to car as cable is to (a) rope (b) string (c) parcel (d) elevator (e) weight	(	)
27.	Creed means the same as (a) belief (b) creek (c) idea (d) thought (e) statement	(	)
28.	What number comes next in the following series 19, 13, 18, 15, 17	(	)
29.	If every fourth letter, namely D, H, etc, were left out of the alphabet, which letter would then become the ninth one?	(	)
30.	Tall is to short as giant is to (a) elf (b) dwarf (c) monster (d) fairy (e) goblin	(	)
31.	If the alphabet were reversed which letter would occupy the position that K does now	, (	)
32.	Link is to lank as hire is to (a) have (b) hold (c) here (d) hare (e) hoar	(	)
33.	Guile means the same as (a) deceit (b) temper (c) annoy (d) trust (e) leave	(	)
34.	What number comes next in the following series 3125, 625, 125	(	)
35.	A car is travelling a distance of 160 miles. If it covers the first half of the journey in 130 minutes and the second half in 110 minutes, what is its average speed for the journey?	; (	•)
36.	Print the letter in the word "Obsolescence". That is as far from the beginning as "L" is from the end	C	Ì )
37.	Rake is to take as rote is to (a) tore (b) tate (c) tame (d) tote (e) tite	(	)
38.	Gratuity means the same as (a) free (b) tip (c) money (d) gold (e) silver	. (	)
39.	February is to June as June is to	(	)
40.	Pulverize means the same as (a) crush (b) hit (c) beat (d) slap (e) push	(	)
41.	What number comes next in the following series 2, 8, 3, 27, 4	(	)
42.	A boy covers 1/3 of his journey on foot; he rides a streetcar for g of his journey and then covers the final 2 miles of his journey on foot again. How long was his journey?		)
43.	If the alphabet started at L instead of A, what would then be the tenth letter?	(	)
44.	Indicate the word that does not belong (a) now (b) tomorrow (c) when (d) where (e) often (f) then	(	)

.

45 . January is to June as August is to ſ ) -46. If two cars seven miles apart are travelling towards one another at 45 and 15 M.P.H. respectively, how long will it be before they meet? ١ If all the letters in the word "Match" were removed from the 47. alphabet, what would then become the sixteenth letter } 48. Tall is to short as inquisitive is to (a) forgetful (b) eager (c) uninterested (d) knowledge (e) anxious (f) queer How many cubic feet of water will fill a tank 4 ft. by 92 ft. 49. by 12 ft. Meal is to male as bear is to 50. (a) bore (b) reab (c) rabe (d) bare (e) boar ) Print the tenth letter before the fourth letter after R in 51. the alphabet 52. Indicate the word that does not belong (a) dollar (b) cent (c) dime (d) money (e) nickel (f) quarter . . Assail means the same as 53. (a) ask (b) move (c) attack (d) shape (e) shove Tall is to short as descend is to 54. (a) condescend (b) enter (c) extend (d) go (e) rise (f) wander If the fifth day before yesterday was Monday what day will 55. it be tomorrow Pollute means the same as 56. (a) polite (b) dirty (c) rude (d) clean (e) hard What letter comes just as far after N in the alphabet as 57. ) L comes after U in the word Insufferable ) ( One-fourth is to one-ninth as 36 is to 58 . Indicate the word that does not belong 59. (a) vain (b) velvet (c) vat (d) fat (e) vein (f) vice In a certain code KLWPSHAL means "Depilate". Use this code 60. ) to write "Tide" What number comes next in the following series 61. ) 3/1, 9/2, 27/3 If today is Monday and there are ten more days to go in the 62. month what will the last day of the month be? What number, when multiplied by itself, is 5 less than 63. ( one quarter of 164 Indicate the word that does not be long 64. (a) Keg (b) King (c) knee (d) knife (e) knock (f) lock ( One-seventh is to one-eighth as 64 is to 65. In a certain code OXAUEFQD means "Cloister". Use this code 66. ) ( to write Riot What number comes next in the following series 67. ) 7/9, 5/11, 3/13

<ul> <li>68. One-seventh is to one-eleventh as 55 is to ()</li> <li>69. In a certain code KIMHESA means "Default". Use this code to write "Tale" ()</li> <li>70. Indicate the group that does not belong (a) ACD (b) RTU (c) NPQ (d) EHI (e) LNO (f) DFG ()</li> <li>71. What is the number four ninths of which is 24 ()</li> <li>72. If today was the twelfth of the month and a Wednesday what day was the first of the month ()</li> <li>73. What number comes next in the following series 9, 1/3, 16, 1/4, 25 ()</li> <li>74. A pie is cut so that one piece, which is one-ninth of the pie, is twice as large as each of the other pieces. Into how many pieces is the pie cut? ()</li> <li>75. Indicate the group that does not belong (a) 9 (b) 12 (c) 17 (d) 6 (e) 45 (f) 51. ()</li> </ul>	· ·			
<ul> <li>69. In a certain code KIMHESA means "Default". Use this code to write "Tale"</li> <li>70. Indicate the group that does not belong <ul> <li>(a) ACD (b) RTU (c) NFQ (d) EHI (e) LNO (f) DFG</li> <li>71. What is the number four ninths of which is 24</li> <li>72. If today was the twelfth of the month and a Wednesday what day was the first of the month</li> <li>73. What number comes next in the following series 9, 1/3, 16, 1/4, 25</li> <li>74. A pie is cut so that one piece, which is one-ninth of the pie, is twice as large as each of the other pieces. Into how many pieces is the pie cut?</li> </ul> </li> <li>75. Indicate the group that does not belong <ul> <li>(a) 9 (b) 12 (c) 17 (d) 6 (e) 45 (f) 51.</li> </ul> </li> </ul>	68.	One-seventh is to one-eleventh as 55 is to	. (	)
<ul> <li>70. Indicate the group that does not belong <ul> <li>(a) ACD (b) RTU (c) NPQ (d) EHI (e) INO (f) DFG</li> <li>()</li> </ul> </li> <li>71. What is the number four ninths of which is 24</li> <li>()</li> <li>72. If today was the twelfth of the month and a Wednesday what day was the first of the month <ul> <li>()</li> </ul> </li> <li>73. What number comes next in the following series <ul> <li>()</li> <li>74. A pie is cut so that one piece, which is one-ninth of the pie, <ul> <li>is twice as large as each of the other pieces. Into how </li> <li>many pieces is the pie cut?</li> </ul> </li> <li>75. Indicate the group that does not belong <ul> <li>(a) 9 (b) 12 (c) 17 (d) 6 (e) 45 (f) 51.</li> </ul> </li> </ul></li></ul>	69.	In a certain code KIMHESA means "Default". Use this code to write "Tale"	(	Ĵ
<ul> <li>71. What is the number four ninths of which is 24</li> <li>72. If today was the twelfth of the month and a Wednesday what day was the first of the month ()</li> <li>73. What number comes next in the following series 9, 1/3, 16, 1/4, 25 ()</li> <li>74. A pie is cut so that one piece, which is one-ninth of the pie, is twice as large as each of the other pieces. Into how many pieces is the pie cut? ()</li> <li>75. Indicate the group that does not belong (a) 9 (b) 12 (c) 17 (d) 6 (e) 45 (f) 51. ()</li> </ul>	<b>70.</b>	Indicate the group that does not belong (a) ACD (b) RTU (c) NPQ (d) EHI (e) INO (f) DFG	(	)
<ul> <li>72. If today was the twalfth of the month and a Wednesday what day was the first of the month ()</li> <li>73. What number comes next in the following series (), 1/3, 16, 1/4, 25 ()</li> <li>74. A pie is cut so that one piece, which is one-ninth of the pie, is twice as large as each of the other pieces. Into how many pieces is the pie cut? ()</li> <li>75. Indicate the group that does not belong (a) 9 (b) 12 (c) 17 (d) 6 (e) 45 (f) 51. ()</li> </ul>	71.	What is the number four ninths of which is 24	. (	)
<ul> <li>73. What number comes next in the following series 9, 1/3, 16, 1/4, 25 (2)</li> <li>74. A pie is cut so that one piece, which is one-ninth of the pie, is twice as large as each of the other pieces. Into how many pieces is the pie cut? (2)</li> <li>75. Indicate the group that does not belong (a) 9 (b) 12 (c) 17 (d) 6 (e) 45 (f) 51. (2)</li> </ul>	72.	If today was the twelfth of the month and a Wednesday what day was the first of the month	(	;
<ul> <li>74. A pie is cut so that one piece, which is one-ninth of the pie, is twice as large as each of the other pieces. Into how many pieces is the pie cut?</li> <li>75. Indicate the group that does not belong <ul> <li>(a) 9</li> <li>(b) 12</li> <li>(c) 17</li> <li>(d) 6</li> <li>(e) 45</li> <li>(f) 51.</li> </ul> </li> </ul>	73.	What number comes next in the following series $9, 1/3, 16, 1/4, 25$	(	į
75. Indicate the group that does not belong (a) 9 (b) 12 (c) 17 (d) 6 (e) 45 (f) 51. ()	74•	A pie is cut so that one piece, which is one-ninth of the pie, is twice as large as each of the other pieces. Into how many pieces is the pie cut?	(	)
	75.	Indicate the group that does not belong (a) 9 (b) 12 (c) 17 (d) 6 (e) 45 (f) 51.	(	)

IF YOU HAVE ANY TIME LEFT GO BACK AND CHECK YOUR ANSWERS

## CANADIAN ARMY CLASSIFICATION TEST

المروح المراجع

FILL IN THE FOLLOWING PARTICULARS WHEN YOU ARE TOLD

Your first name	
Your last name	
Formal schooling	
Centre	<b>v</b>
Date	
Age in years	

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

Read the following carefully:

1. This is a short test to find out how quickly and accurately you can answer a series of simple questions. 2. Some of the questions are easy. Others are hard. No one is expected to do everything, but do the best you can. 3. If you cannot do any question, leave it out and go on to the next. Return to it later if you have any time left. 4. When you finish one page go on to the next. 5. You may do any rough work or figuring at the sides of the pages if you wish. 6. The answers are to be written in the brackets at the right of the questions. Here are some practice questions to show what you are expected to do: 1. What number comes next in the following series ? (12) 2, 4, 6, 8, 10 The numbers increase 2 at a time, therefore the number after 10 will be 12, and this number has been written in the brackets at the right. 2. Which word does not belong in this list? (a) green (b) violet (c) red (d) sweet (e) yellow (f) black (d) These are all colcurs except sweet, so d is written in the brackets. 3. Bird is to air as fish is to (a) water (b) swim (c) bait (d) net (e) catch (a) The answer is a, so this letter is written in the brackets. 4. ABCDEFGHIJKLMNOPQRSTUVWXYZ Print the letter before the sixth letter from the beginning of the ( E ) alphabet. The sixth letter from the beginning of the alphabet is F, and the the letter before it is E, so E has been written in the brackets. 5. Last Tuesday was April 19th. If next Thursday is three days away, (25) what day of the month is today? Today must be Monday, April 25th, so 25 has been written in the brackets. Now go ahead and try the following questions: 6. What number comes next in the following series ? ( ) 1, 10, 2, 20, 3, 30 7. Which word does not belong in this list ? (a) wood (b) iron (c) copper (d) lead (e) tin (f) aluminum ) ſ 8. Snow is to winter as rain is to (a) water (b) umbrella (c) cloud (d) shower (e) summer ( ) ( ) 9. One third of one half is ? 10. A car is travelling at 60 m.p.h.. How long will it take to cover ( ) 240 miles ?

The questions you have just done were practice questions. The questions in this test must be answered in the same way You will be given 35 minutes to do this test.

Ask no questions at all during the test.

DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO GO

•	3			
l.	Black is to white as Hard is to (a) difficult (b) trying (c) soft (d) medium (e) smooth		(	)
2.	Indicate the word that does not belong (a) table (b) chair (c) chesterfield (d) bed (e) floor (f) lamp		.(	)
3.	2, 12, 3, 13, 4		(	)
.4.	If the day before yesterday was Monday what day will it be tomorrow		(	)
5.	Engine is to car as lens is to (a) glass (b) mirror (c) camera (d) film (e) movie		(	)
6.	Grumble means the same as (a) shout (b) complain (c) speak (d) say (e) voice		(	)
7.	Link is to lank as tire is to (a) tore (b) ture (c) told (d) tank (e) tare		(	)
8.	If the alphabet were reversed which letter would occupy the position that L does now		(	)
9.	Garnish means the same as (a) paint (b) draw (c) sculpture (d) sketch (e) decorate		(	)
10.	Indicate the word which does not belong (a) sheep (b) dog (c) cat (d) mouse (e) monkey (f) tree		(	)
11.	What number comes next in the following series .01, .02, .04, .08		(	)
12.	A car is travelling a distance of 140 miles. If it covers the first half of the journey in 120 minutes and the second half in 90 minutes, what is its average speed for the journey?		(	)
13.	Print the letter in the word "Obnoxious". That is as far from the beginning as "N" is from the end		(	)
14.	Rake is to take as rite is to (a) tike (b) tite (c) tote (d) tete (e) tard		(	)
15.	Trek means the same as (a) walk (b) spin (c) drive (d) journey (e) easy		(	)
16.	June is to November as January is to	· -	(	)
17.	A boy covers $\frac{1}{4}$ of his journey on foot; he rides a streetcar for 2/3 of his journey and then covers the final 3 miles of his journey on foot again. How long was his journey?		(	- - 
18.	If the alphabet started at K instead of A, what would then be the ninth letter?		(	)
19.	Expunge means the same as (a) trace (b) follow (c) allow (d) erase (e) seek		(	)
20.	May is to December as December is to		(	)
21.	What number comes next in the following series 8, 6, 3, 10, 8			)
22.	If two cars five miles apart are travelling towards one another at 80 and 40 M.P.H. respectively, how long will it be before they meet?		(	)

. •

23.	If all the letters in the word "Husky" were removed from the alphabet, what would then become the eighteenth letter?	(
24.	What number comes next in the following series $13\frac{1}{2}$ , 12, $10\frac{1}{2}$ , 9	(
25.	(a) artificial (b) ruse (c) real (d) imaginary (e) plain	· · · · · · · · · · · · · · · · · · ·
26.	How many cubic feet of water will fill a tank 6 ft. by $8\frac{1}{2}$ ft. by 11 ft.	(
27.	Tall is to short as strong is to (a) able (b) willing (c) helpful (d) meek (e) weak	(
28.	Plausible means the same as (a) understandable (b) thinkable (c) believable (d) touchable (e) seeable	(
29.	If the day after tomorrow is Friday then the day before yesterday was	<b>(</b>
30.	Tall is to short as giant is to (a) elf (b) dwarf (c) monster (d) fairy (e) goblin	. (
31.	What letter comes just as far after Q in the alphabet as G comes after R in the word Parallelogram	(
32.	Branch is to tree as soldier is to (a) Army (b) Navy (c) Officer (d) Sailor (e) Marine	·
33.	Dunce means the same as (a) boy (b) dullard (c) girl (d) child (e) animal	(
34.	What number comes next in the following series 10, 12, 15, 11, 13	
<b>"35</b> •.	If every third letter, namely C, F, etc, were left out of the alphabet, which letter would then become the tenth one?	. (
36.	A boy left home at 10 minutes past two o'clock, walking at 4 miles per hour. If he arrived at his destination at 40 minutes past three o'clock, what distance had he covered?	(
·37.	If the alphabet were reversed which letter would occupy the position that U does now	.(
. <b>38</b> .	Vehement means the same as (a) long (b) inspired (c) short (d) ardent (e) hard	
39•	If 60 M.P.H. is equivalent to 88 feet per second, how fast must a car be travelling to cover 156 feet in four seconds?	(
40.	Pulverize means the same as (a) crush (b) hit (c) beat (d) slap (e) push	. (
41.	Print the letter in the word "Designate". That is as far from the end as "N" is from the beginning	. (
42.	Indicate the word that does not belong (a) round (b) square (c) triangular (d) oval (e) egg (f) oblong	(
43.	January is to June as June is to	(
•		

44.	What number comes next in the following series 12, 12, 18, 6, 6	(	. )
45 •	A man makes three purchases which amount to \$3.66. If the sum of the first and third purchases is half that of the second one, what is the amount of the second purchase?		)
46.	If the alphabet started at G instead of A, what would then be the fourteenth letter	(	)
47.	Indicate the word which does not belong (a) book (b) manuscript (c) type (d) thesis (e) volume (f) tract	(	: : )
48.	Tall is to short as faith is to (a) creed (b) love (c) hope (d) sin (e) duty (f) distrust	(	)
49 •	Cipher means the same as (a) writing (b) printing (c) code (d) manuscript (e) tale	(	)
50.	Meal is to male as bear is to (a) bore (b) reab (c) rabe (d) bare (e) boar		)
51.	If all the letters in the word "Spare" were removed from the alphabet, what would then become the twentieth letter?	(	)
52.	Indicate the word that does not belong (a) snake (b) document (c) soft (d) wire (e) plug (f) theatre	(	)
53.	Putrify means the same as (a) break (b) smash (c) ruin (d) decay (e) loss	(	)
54.	Print the fifth letter before the eighth letter after C in the alphabet	(	)
55.	Easy is to simple as scheme is to (a) purposeful (b) plan (c) tale (d) story (e) move	(	)
56.	Perforate means the same as (a) push (b) throw (c) pierce (d) tear (e) pull	(	)
57.	If the first of January is a Thursday what day must the last day of the month be	(	)
58.	What letter comes just as far after F in the alphabet as C comes after O in the word "Retrospect"	(	<b>)</b> .
59•	Indicate the word that does not belong (a) match (b) coal (c) ash (d) wood (e) coke (f) paper	(	)
60.	In a certain code KLWPSHAL means "Depilate". Use this code to write "Tide"	(	)
61.	What is the number three elevenths of which is 33	(	)
62.	One-sixth is to one-seventeenth as 68 is to	(	)
63.	In a certain code LYGHUHN means "Remmant". Use this code to write Near	<b>(</b> .	•)
64.	Indicate the group that does not belong (a) 64 (b) 32 (c) 24 (d) 40 (e) 46 (f) 56	(	)
65.	What number comes next in the following series $\frac{1}{2}$ , 3/6, 9/18	(	)
66.	What number, when multiplied by itself, is 10 less than one-fifth of 175?	(	)

•

•

. 7
67.	Indicate the word that does not belong (a) lace (b) long (c) live (d) love (e) move (f) lick	. (	)
68.	Print the eighth letter before the second letter after P in the alphabet	(	)
69.	One-third is to one-seventh as 35 is to	(	)
70.	Indicate the group that does not belong (a) ACD (b) RTU (c) NPQ (d) EHI (e) LNO (f) DFG	(	)
71.	What number comes next in the following series 4, $\frac{1}{2}$ , 9, 1/3, 16	(	)
72.	Indicate the word that does not belong (a) waste (b) paste (c) wet (d) wage (e) win (f) war	(	)
73.	One-sixth is to one-seventh as 42 is to	(	• )
74.	code In a certain ODQMFQ means "Create". Use this code to write Care	(	)
75.	A pie is cut so that one piece, which is one tenth of the pie, is twice as large as each of the other pieces. Into how many pieces is the piecut?	(	

IF YOU HAVE ANY TIME LEFT GO BACK AND CHECK YOUR ANSWERS

FORM 10

#### CANADIAN ARMY CLASSIFICATION TEST

#### FILL IN THE FOLLOWING PARTICULARS WHEN YOU ARE TOLD

Your first name	
Your last name	
Formal schooling	
Centre	
Date	

Age in years

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

ad the following carefully:

- 1. This is a short test to find out how quickly and accurately you can answer a series of simple questions.
- 2. Some of the questions are easy. Others are hard. No one is expected to do everything, but do the best you can.
- 3. If you cannot do any question, leave it out and go on to the next. Return to it later if you have any time left.
- 4. When you finish one page go on to the next.
- 5. You may do any rough work or figuring at the sides of the pages if you wish.
- 6. The answers are to be written in the brackets at the right of the questions.

Here are some practice questions to show what you are expected to do:

- 1. What number comes next in the following series ?
  2, 4, 6, 8, 10 (12)
  The numbers increase 2 at a time, therefore the number after 10 will be 12, and this number has been written in the brackets at the right.
- 2. Which word does not belong in this list?
  (a) green (b) violet (c) red (d) sweet (e) yellow (f) black (d) These are all colcurs except sweet, so d is written in the brackets.
- 3. Bird is to air as fish is to (a) water (b) swim (c) bait (d) net (e) catch (a) The answer is a, so this letter is written in the brackets.
- 4. ABCDEFGHIJKIMNOPQRSTUVWXYZ Print the letter before the sixth letter from the beginning of the (E) alphabet. The sixth letter from the beginning of the alphabet is F, and the the letter before it is E, so E has been written in the brackets.
- 5. Last Tuesday was April 19th. If next Thursday is three days away, what day of the month is today? (25)
  Today must be Monday, April 25th, so 25 has been written in the brackets.

Now go ahead and try the following questions:

- 6. What number comes next in the following series ? 1, 10, 2, 20, 3, 30 ()
- 7. Which word does not belong in this list ?
  (a) wood (b) iron (c) copper (d) lead (e) tin (f) aluminum ( )
- 8. Snow is to winter as rain is to (a) water (b) umbrella (c) cloud (d) shower (e) summer (

9. One third of one half is ?

10. A car is travelling at 60 m.p.h.. How long will it take to cover 240 miles ?

> The questions you have just done were practice questions. The questions in this test must be answered in the same way You will be given 35 minutes to do this test.

)

)

)

(

Ask no questions at all during the test.

DO NOT TURN OVER THIS PAGE UNTIL YOU ARE TOLD TO DO 30

	<b>3</b>			
1.	Black is to white as big is to (a) large (b) costly (c) more (d) small (e) less	(		)
2.	Indicate the word that does not belong (a) birch (b) elm (c) trunk (d) oak (e) pine (f) maple	(		)
3.	January is to June as April is to	(		)
4.	Tall is to short as true is to (a) proper (b) untruth (c) false (d) honest (e) plain (f) doubt	(		)
<b>5.</b>	Indicate the word that does not belong (a) orange (b) apple (c) banana (d) potato (e) pear (f) peach	. (		)
6.	Epoch means the same as (a) race (b) man (c) history (d) era (e) nation	(		)
7.	Engine is to car as dial is to (a) tube (b) radio (c) aerial (d) star (e) stem	(		)
8.	If the day after tomorrow is Tuesday then the day before yesterday was	(		)
9.	Pinnacle means the same as (a) mountain (b) cliff (c) hill (d) summit (e) dale	(		)
10.	What number comes next in the following series 2, 6, 14, 30	(		)
11.	If the alphabet were reversed which letter would occupy the position that M does now	(		)
12.	Grief means the same as (a) annoyance (b) anger (c) sorrow (d) temper (e) emotion	(		)
13.	A car is travelling a distance of 200 miles. If it covers the first half of the journey in 220 minutes and the second half in 180 minutes, what is its average speed for the journey?	(		)
ц.	Print the letter in the word "Insufferable" that is as far from the beginning as "S" is from the end	(		.) ;);
15.	Rake is to take as rage is to (a) tige (b) tarm (c) tage (d) tame (e) tort	. (		)
16.	What number comes next in the following series 4, 3, 5, 4, 6	(		)
17.	A boy covers $1/5$ of his journey on foot; he rides a streetcar for $\frac{3}{4}$ of his journey and then covers the final 2 miles of his journey on foot again. How long was his journey?	(	· .	.):
18.	Link is to lank as mile is to (a) mole (b) mill (c) male (d) more (e) mere	(		}
19.	If the alphabet started at K instead of A, what would then be the eleventh letter	(		)
20.	Indicate the word that does not belong (a) scowl (b) grimace (c) laugh (d) sneer (e) hear (f) grin	<b>(</b> , <sup>1</sup>		• • • •
21.	March is to September as September is to	(		)
22.	What number comes next in the following series 8, 3, 11, 9, 14	(		)
÷				

•

23.	If two cars six miles apart are travelling towards one another at 50 and 40 M.P.H. respectively, how long will it be before they meet?	<b>(</b>	)
24.	If all the letters in the word "Spear" were removed from the alphabet, what would then become the thirteenth letter	. (	)
25.	Anxious means the same as (a) calm (b) weak (c) worried (d) strong (e) old	(	)
26.	How many cubic feet of water will fill a tank 5 ft. by 6 ft. by $10\frac{1}{8}$ ft.	(	)
27.	Indicate the word which does not belong (a) one (b) six (c) four (d) third (e) five (f) two	(	)
28.	Pertain means the same as (a) aid (b) belong (c) leave (d) help (e) emit	(	)
29.	Branch is to tree as wheel is to (a) road (b) lane (c) car (d) whole (e) wheat	· (	)
30.	Tall is to short as giant is to (a) elf (b) dwarf (c) monster (d) fairy (e) goblin	(	)
31.	Enigma means the same as (a) riddle (b) test (c) try (d) extend (e) prove	(	)
<u>3</u> 2.	What number comes next in the following series 1, 2, $\frac{1}{2}$ , $2\frac{1}{2}$ , $\frac{1}{4}$	(	)
33.	A boy left home at 20 minutes past two o'clock, walking at 3 miles per hour. If he arrived at his destination at four o'clock exactly, what distance had he covered?	(	)
34.	If the alphabet were reversed which letter would occupy the position that $V$ does now	(	)
35.	Verge means the same as (a) grass (b) brink (c) brick (d) break (e) bring	(	)
36.	What number comes next in the following series 27, 9, 3, 64, 16	(	.)
37.	If 60 M.P.H. is equivalent to 88 feet per second, how fast must a car be travelling to cover 396 feet in six seconds?	(	)
38.	Print the letter in the word "Reasonable" that is as far from the end as "N" is from the beginning	(	)
39.	Indicate the word that does not belong (a) run (b) hop (c) walk (d) climb (e) jump (f) skip	(	)
40.	Pulverize means the same as (a) crush (b) hit (c) beat (d) slap (e) push	(	)
41.	May is to December as November is to	(	• • •
42.	What number comes next in the following series 16, 6, 13, 11, 10	<u>en (</u> 1	)
43	Surly means the same as (a) tired (b) lazy (c) easy (d) uncivil (e) polite		<b>, )</b>
44.	A man makes three purchases which amount to \$4.80. If the sum of the first and third purchases is half that of the second one, what is the amount of the second purchase?	(	)

45.	If the alphabet started at F instead of A, what would then be the twelfth letter?	(	)
46.	Tall is to short as haughty is to (a) high (b) inhuman (c) intrepid (d) lowly (e) loving (f) proud	(	)
47.	Civil means the same as (a) honest (b) true (c) polite (d) rude (e) abrupt	(	)
48.	If all the letters in the word "Dirty" were removed from the alphabet, what would then become the thirteenth letter?	(	)
49.	Purloin means the same as (a) hold (b) touch (c) run (d) steal (e) possess	(	)
50.	Meal is to male as bear is to (a) bore (b) reab (c) rabe (d) bare (e) boar	(	)
51.	If every third letter, namely C, F, etc, were left out of the alphabet, which letter would then become the sixth one?	(	)
52.	Easy is to simple as wage is to (a) salary (b) money (c) table (d) amount (e) sum	(	)
53.	Futile means the same as (a) useful (b) useless (c) easy (d) difficult (e) hard	(	)
54.	If today is Friday what was the fifth day before tomorrow	(	)
55.	What number comes next in the following series 1, 5, 9, 13	(	)
56.	What letter comes just as far after B in the alphabet as N comes after P in the word "Sophistication"		)
57.	Indicate the word that does not belong (a) man (b) more (c) mace (d) lace (e) mine (f) maid	(	)
<b>58.</b>	Print the sixth letter before the third letter after G in the alphabet	(	)
59.	Indicate the word that does not belong (a) man (b) key (c) pretty (d) road (e) house (f) shop	(	)
60.	In a certain code KLWPSHAL means "Depilate". Use this code to write "Tide"	(	)
61.	What is the number two thirds of which is 44	.(	)
62.	One-fifth is to one-ninth as 45 is to	<b>(</b> .	)
63.	What letter comes just as far after F in the alphabet as D comes after X in the word "Extraordinary"		)
64.	In a certain code RTTUDRXJMOX meens "Approaching". Use this code to write Poach	(	)
65.	What number comes next in the following series 8, 7, 9, 8, 10	<b>(</b>	)
66.	One-half is to one-seventh as 28 is to	ļ	)
67.	In a certain code XCMUVOMY means Disabuse. Use this code to write Dais	(	)

68.	What number, when multiplied by itself, is 8 less than one sixth of 144	ļ	)
69.	Indicate the word that does not belong (a) yet (b) bet (c) yard (d) yeast (e) year (f) young	(	)
70.	Indicate the group that does not belong (a) ACD (b) RTU (c) NPQ (d) EHI (e) LNO (f) DFG	(	)
71.	Print the third letter before the seventh letter after P in the alphabet	(	)
72 <b>.</b> ·	If today is Sunday and there are ten more days to go in the month what will the last day of the month be?	(	)
73 •	One-fifth is to one-sixth as 24 is to	(	)
74.	A pie is cut so that one piece, which is one-eleventh of the pie, is twice as large as each of the other pieces. Into how many pieces is the pie cut?	. (	)
75.	Indicate the group that does not belong (a) 27 (b) 35 (c) 54 (d) 81 (e) 63 (f) 18.	(	)

IF YOU HAVE ANY TIME LEFT GO BACK AND CHECK YOUR ANSWERS

.

۲

7

### CANADIAN ARMED FORCES CLASSIFICATION TEST

### FILL IN THE FOLLOWING PARTICULARS WHEN YOU ARE TOLD

Your first name	
Your last name	· .
Formal schooling	
Service centre	
Date	
	•

 ${\bf E}_{2n-1} = \left[ \left[ {1 \over 2} \right]_{2n-1} \left[ {1 \over 2}$ 

Age in years \_\_\_\_\_

,

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

Read the following carefully:

- 1. This is a short test to find out how quickly and accurately you can answer a series of simple questions.
- 2. Some of the questions are easy. Others are hard. No one is expected to do everything, but do the best you can.
  - 3. If you cannot do any question, leave it out and go on to the next. Return to it later if you have any time left.
  - 4. When you finish one page go on to the next.
  - 5. You may do any rough work or figuring on the blank pages if you wish.
  - 6. The answers are to be written in the brackets at the right of the questions.

Here are some practice questions to show what you are expected to de:

- What number comes next in the following series ?
   2, 4, 6, 8, 10 (12) The numbers increase 2 at a time, therefore the number after 10 will be 12, and this number has been written in the brackets at the right.
- 2. Indicate the word that does not belong (a) green (b) violet (c) red (d) sweet (e) yellow (f) black (d) These are all colours except sweet, so d is written in the brackets.
- 3. Bird is to air as fish is to (a) water (b) swim (c) bait (d) net (e) catch The answer is a, so this letter is written in the brackets
- 4. ABCDEFGHIJKIMNOPQRSTUVWXYZ Print the letter before the sixth letter from the beginning of the alphabet (E) The sixth letter from the beginning of the alphabet is F and the letter before it is E, so E has been written in the brackets.

Now go ahead and try the following questions:

- 5. What number comes next in the following series?

  1, 10, 2, 20, 3, 30

  6. Indicate the word that does not belong.

  (a) wood (b) iron (c) copper (d) lead (e) tin (f) aluminum

  7. Snew is to winter as rain is to

  (a) water (b) umbrelIa (c) cloud (d) shower (e) summer

  8. One third of one half is ?
- 9. A car is travelling at 60 m.p.h.. How long will it take to cover 240 miles ? ()

The questions you have just done were practice questions. The questions in this test must be answered in the same way. You will be given 25 minutes to do this test.

Ask no questions at all during the test.

DO NOT TURN OVER THIS PAGE UNTIL Y OU ARE TOLD TO DO SO

Form 1
--------

•

1.	Black is to white as love is to (a) affection (b) like (c) leave (d) hate (e) admire	(1	)	
2.	Rake is to take as rail is to a) tail (b)-tale-(c)-talk-(d)-tike (e) tame	- <b>(</b>	)	
3.	Tall is to short as solid is to (a) hard (b) heavy (c) strong (d) rock (e) hollow (f) deep	(	)	
4.,	Indicate the group that does not belong (a) 30 (b) 70 (c) 80 (d) 75 (e) 40 (f) 90	(	)	
5.	Easy is to simple as vehicle is to (a) aeroplane (b) car (c) horse (d) dog (e) vehement	(	)	
6.	What number comes next in the following series? 1.01, 2.05, 3.09, 4.13	(	)	
7.	Gratia means the same as (a) free (b) expensive (c) cheap (d) anney (e) touch	(	)	
8.	What number comes next in the following series? $1/3$ , $2/5$ , $3/7$	(	ý	
9.	How many cubic feet of water will fill a tank 5 $1/2$ ft. by 8 ft. by 12 ft. ?	(	)	
10.	Indicate the word that does not belong. (a) age (b) aim (c) again (d) plain (e) ace (f) art	(	)	
11.	Fracas means the same as (a) push (b) pull (c) touch (d) row (e) sleep	(	· · · )	
12.	Indicate the word that does not belong. (a) image (b) picture (c) sketch (d) writing (e) copy (f) painting	(	)	
13.	In a certain code PQNAZMUD means "Debonair". Use this code to write "Robe".	(	)	
14.	Bondage means the same as (a) punishment (b) slavery (c) imprisonment (d) trial (e) sentence	(	)	
15.	What number comes next in the following series ? 16, 18, 22, 12, 14, 18	(	)	
16.	What number, when multiplied by itself, is 8 less than one quarter of 96 ?	(	)	
17.	What number comes next in the following series $2$ 3, 4, 5, 4, 5	(	2 <b>)</b>	
18.	January is to June as May is to	(	)	
19.	What letter comes just as far after G in the alphabet as L comes after N in the word "sincerely" ?	<b>(</b> 4	)	
20.	Print the letter in the word "untenable" that is as far from the end as $B^{\infty}$ is from the beginning.	(	)	
21.	What is the number three fifths of which is 27?	(	)	
22。	What number comes next in the following series ? 9, $1/3$ , 25, $1/5$ , 49,	(		
23.	If the alphabet were reversed which letter would occupy the position that P does now ?	(	)	

ŀ

Form A

	4.	A pie is cut so that one piece, which is a quarter of the pie, is twice as large as each of the other pieces. Into how many pieces is the pie- cut?		
	]	March it to Sentember of August is to	( ( 	, <u> </u>
ľ	26	Trdieste the merel that does not h les	(	)
	20.	(a) save (b) sin (c) sound (d) sack (e) sad (f) bad	(	)
1.1.1.1.1.1.1.1.1	27。	If today is the twelfth of the month and a Friday, what day was the first of the month?	(	)
	28.	Indicate the word that does not belong (a) wheel (b) saucer (c) cent (d) postcard (e) moon (f) disc	(	)
· · · · · · · · · · · · · · · · · · ·	29.	If the alphabet started at M instead of A, what would then be the ninth letter?	(	)
and the second se	30.	What number comes next in the following series 1, $1/3_{p}$ $1/9_{p}$ $4_{p}$ $4/3$	(	· )·
	31.	What is the number three sevenths of which is 39	(	
	32。	Indicate the word that does not belong (a) tough (b) tack (c) touch (d) test (e) best (f) test		)
	33。	Print the letter in the word "Omnipstent" that is as far from the beginning as I is from the end.	(	)
	34.	What number comes next in the following series? 1.15, 1.50, 1.85	(	)
	35.	Despeil means the same as (a) push (b) plunder (c) steal (d) tsuch (e) held	(	)
	36.	In a certain code LZAPCHS means "Estival". Use this code to write "Late"	(	)
	37。	Gaunt means the same as (a) poor (b) lean (c) tender (d) hard (e) soft	(	)
	38W)	nat number comes next in the following series? 3125, 625, 125	(	)
	39.	Link is to lank as hire is to (a) have (b) hold (c) here (d) hare (e) hoar	(	)
	40.	In a certain code KPYIMBS means "Direful". Use this code to write "Lure"	(	· · · ) · · · ·
	41.	What letter comes just as far after N in the alphabet as L comes after U in the word "Insufferable"?	(	)
	42。	If today is Monday and there are ten more days to go in the month, what will the last day of the month be ?	(	)
	43.	Print the letter in the word "Obnexicus" that is as far from the beginning as "N" is from the end.	(	· · · · · · · · · · · · · · · · · · ·
	44.	June is to November as January is to	(	. )
	45.1	What letter comes just as far after F in the alphabet as C comes after 0 in the word "Retrospect" ?	(	)

4

.

6.	What number comes next in the fellowing series?		
		1	) ) (
7.	Rake is to take as rage is to (a) tige (b) tarm (c) tage (d) tame (e) tort	Ĉ.	)
48.	May is to December as December is to	(	)
49.	If the alphabet started at K instead of A, what would then be the eleventh letter?	(	)
50.	Verge means the same as ( (a) grass (b) brink (c) brick (d) break (c)bring	<b>(</b> .	)
51.	Indicate the word that does not belong (a) man (b) more (c) mace (d) lace (e) mine (f) maid	(	)
52.	What letter comes just as far after F in the alphabet as D comes after X in the word "Extraordinary" ?	(	)
53。	In a certain code RTTUDRXJMOX means "Approaching". Use this code to write "Poach".	(	)
54.	Indicate the group that dees not belong (a) 27 (b) 35 (c) 54 (d) 81 (e) 63 (f) 18	· · · · ·	)
55.	If the alphabet were reversed, which letter would occupy the position that V does now ?	(	)

IF YOU HAVE ANY TIME LEFT GO BACK AND CHECK YOUR ANSWERS

FORM B

1

#### CANADIAN ARMED FORCES CLASSIFICATION TEST

## FILL IN THE FOLLOWING PARTICULARS WHEN YOU ARE TOLD

Your first name	
Your last name	
Formal schooling	
Service centre	
Date	

Age in years

DO-NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

.

Read the following carefully:

- 1. This is a short test to find out how quickly and accurately you can answer a series of simple questions.
- 2. Some of the questions are easy. Others are hard. No one is expected to do everything, but do the best you can.
- 3. If you cannot do any question, leave it out and go on to the next. Return to it later if you have any time left.
- 4. When you finish one page go on to the next.
- 5. You may do any rough work or figuring on the blank pages if you wish.
- 6. The answers are to be written in the brackets at the right of the questions.

Here are some practice questions to show what you are expected to de:

- What number comes next in the following series ?
   2, 4, 6, 8, 10 (12)
   The numbers increase 2 at a time, therefore the number after 10 will be 12, and this number has been written in the brackets at the right.
- 2. Indicate the word that does not belong (a) green (b) violet (c) red (d) sweet (e) yellow (f) black (d) These are all colours except sweet, so d is written in the brackets.
- 3. Bird is to air as fish is to (a) water (b) swim (c) bait (d) net (e) catch The answer is a, so this letter is written in the brackets
- 4. ABCDEFGHIJKIMNOPQRSTUVWXYZ Print the letter before the sixth letter from the beginning of the alphabet (E) The sixth letter from the beginning of the alphabet is F and the letter before it is E, so E has been written in the brackets.

New go ahead and try the following questions:

- 5. What number comes next in the following series? 1, 10, 2, 20, 3, 30 ()
- 6. Indicate the word that dees not belong. (a) wood (b) iron (c) coppor (d) lead (e) tin (f) aluminum (

)

)

)

(

7. Snow is to winter as rain is to (a) water (b) umbrella (c) cloud (d) shower (e) summer

8. One third of one half is ?

9. A car is travelling at 60 m.p.h.. How long will it take to cover 240 miles ?

> The questions you have just done were practice questions. The questions in this test must be answered in the same way. You will be given 25 minutes to do this test.

> > Ask no questions at all during the testo

DO NOT TURN OVER THIS PAGE UNTIL Y OU ARE TOLD TO DO SO

#### Form B

1	• Black is to white as love is to ~(a) affection (b) like (c) leave (d) hate (e) admire	(	)
2.	. Rake is to take as rail is to (a) tail (b) tale (c) talk (d) tike (e) tame	(	)
3.	. Tall is to short as solid is to (a) hard (b) heavy (c) strong (d) rock (e) hellow (f) deep	· · · · ·	)
4	Indicate the group that does not belong (a) 30 (b) 70 (c) $\epsilon$ 0 (d) 75 (e) 40 (f) 90	(	)
5.	Easy is to simple as vehicle is to (a) aeroplane (b) car (c) horse (d) dog (e) vehement	( (	) )
6	A boy covers 1/6 of his journey on foot; he rides a streetcar for 4/5 of his journey and then covers the final mile of his journey en foot again. How long was his journey ?	(	)
7.	. If 60 m.p.h. is equivalent to 88 feet per second, how fast must a car be travelling to cover 528 feet in four seconds	(	)
8.	What number comes next in the following series ? $2/7$ , $4/14$ , $8/21$	(	)
9.	A pie is cut so that one piece, which is one twelfth of the pie, is twice as large as each of the other pieces. Into how many pieces is the pie cut ?	(	)
10.	Print the seventh letter before the third letter after R in the alphabet	(	)
11.	What number comes next in the following series ? 10, 9, 13, 7, 6	(	)
12.	What is the number two sevenths of which is 14 ?	(	)
13.	Indicate the word that does not belong (a) base (b) boy (c) bill (d) bald (e) brave (f) slave	(	)
14.	Print the ninth letter before the second letter after W in the alphabet	(	)
15.	Scintillate means the same as (a) sparkle (b) gleam (c) polish (d) rub (e) clean	(	)
16.	If all the letters in the word "Maize" were removed from the alphabet, what would then become the seventeenth letter ?	(	)
17.	Indicate the word that does not belong (a) cat (b) cow (c) clean (d) claim (e) plain (f) clump	(	)
18.	What is the number three eighths of which is 18 ?	(	)
19.	A bey left home at 15 minutes past three e'clock, walking at 6 miles per hour. If he arrived at his destination at 35 minutes past four e'clock, what distance had he covered ?	(	)
20.	Turbulent means the same as (a) heavy (b) soft (c) disturbed (d) eager (e) vain	(	)
	A-car-is travelling a distance of 150-miles. If it covers the first half of its journey in 105 minutes and the second half in 75 minutes, what is its average speed for the journey ?		)

Ferm B

	22.	Print the fourth letter before the seventh letter after F in the alphabet	(	)
	23.	Indicate the group that does not belong (a) 21 (b) 35 (c) 63 (d) 43 (e) 14 (f) 56	(	)
	24.	If all the letters in the word "Great" were removed from the alphabet, what would then become the ningteenth letter ?	, , ,	)
	25.	Faction means the same as (a) whole (b) same (c) party (d) all (e) none		)
	26.	Print the fourth letter before the eighth letter after L in the alphab	et (	)
	27。	Odieus means the same as (a) leud (b) distant (c) near (d) distasteful (e)seft	(	)
	28.	If teday was the twelfth of the month and a Monday, what day was the first of the month ?	(	)
	29.	What number comes next in the following series ? 1, $1/3$ , $1/9$ , $4$ , $4/3$	с. (	)
	30.	Print the tenth letter before the sixth letter after Q in the alphabet	(	)
	31.	If today is Thursday and there are ten more days to go in the month, what will the last day of the month be ?	(	)
	32.	If the alphabet were reversed, which letter would occupy the position that R does now ?	C	)
	33:,	If 60 mopoh. is equivalent to 88 feet per second, how fast must a car be travelling to cover 396 feet in three seconds ?	(	)
	34。	Indicate the word that does not belong (a) chair (b) plan (c) car (d) submarine (c) hard (f) lamp	(	)
	35。	What number, when multiplied by itself, is 6 less than one seventh of 154 ?	(	)
	36.	Indicate the word that does not belong (a) urge (b) under (c) urn (d) turn (e) use (f) utilize		)
	37.	Print the fifth letter before the seventh letter after C in the alphabet,	(	)
	38.	What number, when multiplied by itself, is 6 less than one third of 126 ?	(	)
	39.	Indicate the word that does not belong. (a) lair (b) hair (c) here (d) how (e) have (f) hold	(	)
4	40.	What number comes next in the following series? 19, 13, 18, 15, 17	(	)
	41.	Indicate the word that does not belong (a) keg (b) king (c) knee (d) knife (e) knock (f) lock	(	)
	ŧ¢.	Garnish means the same as (a) paint (b) draw (c) sculpture (d) sketch (e) decerate	( • •	)
4	5,	Print the fifth letter before the eighth letter after C in the alphabet	(	)

4

. •

Form B

44.	What number comes next in the fellowing series 2		
	3/1, 9/2, 27/3	(	)
45.	What number, when multiplied by itself, is 10 less than one fifth of 175 ?	(	)
46。	If all the letters in the word "Spear" were removed from the alphabet, what would then 'become the thirteenth letter?	(	• • •
47。	What number comes next in the following series? 9, $1/3$ , 16, $1/4$ , 25		)
48.	Enigma means the same as (a) riddle (b) test (c) try (d) extend (e) prove		)
49.	What number, when multiplied by itself, is 8 less than one sixth of 144?	(	)
50 <b>.</b>	Surly means the same as (a) tired (b) lazy (c) easy (d) uncivil (e) pelite	(	)
51.	What number comes next in the following series? $1/2$ , $3/6$ , $9/18$	(	.)
52。	If the second day before yesterday was Monday, what day will it be tomorrow ?	(	)
53。	What is the number two thirteenths of which is 12 ?	(	)
54.	Burnish means the same as (a) erase (b) pelish (c) reughen (d) rude (e) paste	(	)
55.	What number comes next in the following series ? 15, 3, 18, 8, 21		)

IF YOU HAVE ANY TIME LEFT GO BACK AND CHECK YOUR ANSWERS

.

.

•

.

### CANADIAN ARMED FORCES CLASSIFICATION TEST

# FILL IN THE FOLLOWING PARTICULARS WHEN YOU ARE TOLD

Your first name	
Your last name	
Formal schooling	
Service centre	10-Chi -0
Date	

Age in years

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

lead the following carefully:

- 1. This is a short test to find out how quickly and accurately you can answer a series of simple questions.
- 2. Some of the questions are easy. Others are hard. No one is expected to do everything, but do the best you can.
- 3. If you cannot do any question, leave it out and go on to the next. Return to it later if you have any time left.
- 4. When you finish one page go on to the next.
- 5. You may do any rough work or figuring on the blank pages if you wish.
- 6. The answers are to be written in the brackets at the right of the questions.

Here are some practice questions to show what you are expected to des

- What number comes next in the following series ?
   2, 4, 6, 8, 10
   (12)
   The numbers increase 2 at a time, therefore the number after 10 will be 12, and this number has been written in the brackets at the right.
- 2. Indicate the word that does not belong (a) green (b) violet (c) red (d) sweet (e) yellow (f) black (d) These are all colours except sweet, so d is written in the brackets.
- 3. Bird is to air as fish is to (a) water (b) swim (c) bait (d) net (e) catch The answer is a, so this letter is written in the brackets
- 4. ABCDEFGHIJKLMNOPQRSTUWXXYZ Print the letter before the sixth letter from the beginning of the alphabet (E) The sixth letter from the beginning of the alphabet is F and the letter before it is E, so E has been written in the brackets.

New go ahead and try the following questions:

5.	What number comes next in the following series? 1, 10, 2, 20, 3, 30	(	)
6.	Indicate the word that dees not belong. (a) wood (b) iron (c) copper (d) lead (e) tin (f) aluminum	(	)
7.	Snew is to winter as rain is to (a) water (b) umbrella (c) cloud (d) shower (e) summer	(	)
8.	One third of one half is ?	. (	)
9.	A car is travelling at 60 m.p.h How long will it take to cover 240 miles ?	· · · (	)

The questions you have just done were practice questions. The questions in this test must be answered in the same way. You will be given 25 minutes to do this test.

Ask no questions at all during the testo

DO NOT TURN OVER THIS PAGE UNTIL Y OU ARE TOLD TO DO SO

1.	Black is to white as love is to (a) affection (b) like (c) leave (d) hate (e) admire	(	)
2.	Rake is to take as rail is to (a) tail (b) tale (c) talk (d) tike (e) tame	(	<u>,                                     </u>
3.	Tall is to short as solid is to (a) hard (b) heavy (c) strong (d) rock (e) hollow (f) deep	- (	)
4.	Indicate the group that does not belong (a) 30 (b) 70 (c) 80 (d) 75 (e) 40 (f) 90	(	)
5.	Easy is to simple as vehicle is to (a) aeroplane (b) car (c) horse (d) dog (e) vehement	<b>1</b>	
6.	What number comes next in the following series? $1/2$ , $3/4$ , $5/8$	(	)
7.	Entail means the same as (a) allow (b) permit (c) neccessitate (d) deny (e) hope	(	)
8.	If two cars four miles apart are travelling towards one another at 25 and 15 m.p.h. respectively, how long will it be before they meet?	(	)
9.	One-fourth is to one-fifth as 40 is to ?	, (	)
10.	A man makes three purchases, which amount to \$ 4.20. If the sum of the first and third purchases is half that of the second one, what is the amount of the second purchase ?	(	) )
11.	One-sixth is to one-eleventh as 33 is to ?	ì	j.
12.	A boy covers $1/5$ of his journey on foot; he rides a streetcar for $3/4$ of his journey and covers the final 1 $1/2$ miles of his journey on foot again. How long was his journey ?	(	)
13.	How many cubic feet of water will fill a tank 6 ft. by 10 $1/2$ ft. by 11 ft. ?	. (	) )
14.	What number comes next in the following series? $1/3, 2/5, 4/7, 7/9$	(	)
15.	If the first of January is a Tuesday , what day must the last day of the month be ?	(	)
16.	One∞third is to one-fourth as 12 is to ?	(	<b>)</b>
17.	If today is the twelfth of the month and a Thursday, what day was the first of the month ?	(	)
18.	Portent means the same as (a) view (b) look (c) sign (d) watch (e) leave	(	)
19.	One∞third is to one-eighth as 32 is to ?	(	)
20.	What number comes next in the following series ? 6, 11, 8, 7, 10	(	)
21.	What is the number two elevenths of which is 18 ?	(	)
22。	Onc-half is to ons-third as 18 is to ?	(	2
23.	If the first of January is a Wednesday, what day must the last day of the month be ?	(	· · · · · · · · · · · · · · · · · · ·

- -----

-

•	F	orm	C
---	---	-----	---

•

	Onerous means the same as (a) light (b) soft (c) heavy (d) sharp (e) dark	(	)
25.	One-third is to one-tenth as 50 is to ?	(	<u>, 1997 (199</u>
26.	What number comes next in the following series ? 3, 9, 4, 16, 5		)
27,	, If every fourth letter, namely D, H, etc., were left out of the alphabet, which letter would then become the thirteenth one ?	(	)
28.	One- half is to one-fifth as 30 is to ?	(	
29.	What number comes next in the following series ? $4, 2/3, 5, 3/4, 6$	(	)
30.	If the first of January is a Saturday, what day must the last day of the month be ?	, (	)
31.	One- third is to one-fifth as 20 is to ?	(	)
32。	Print the ninth letter before the fourth letter after N in the alphabet.	(	2
33.	What number comes next in the following series? 2, 8, 3, 27, 4	- (	)
34.	One- half is to one-eleventh as 33 is to ?	Ċ	5
35.	Indicate the word that does not belong. (a) now (b) tomorrow (c) when (d) where (e) often (f) then	(	)
36.	If the fifth day before yesterday was Monday, what day will it be tomorrow ?	(	)
37。	One-fifth is to one-eighth as 48 is to ?	(	>
38.	If today was the twelfth of the month and a Wednesday, what day was the first of the month ?	(	)
39 <b>.</b>	Indicate the group that does not belong. (a) 9 (b) 12 (c) 17 (d) 6 (e) 45 (f) 51	(	)
40.	One-seventh is to one-eleventh as 55 is to ?	(	)
41.	Indicate the word that does not belong. (a) snake (b) document (c) soft (d) wire (e) plug (f) theatre	(	)
42.	If the first of January is a Thursday, what day must the last day of the month be ?	(	)
43.	What is the number three elevenths of which is 33 ?	.(	)
44。	Indicate the group that does not belong. (a) 64 (b) 32 (c) 24 (d) 40 (e) 46 (f) 56	(	)
45 <b>.</b>	Print the eighth letter before the second letter after I in the alphabet.	(	)
46 <b>.</b> 7	That number comes next in the following series ? 16, 6, 13, 11, 10	(	)

Form C

	•	Purloin means the same as (a) hold (b) touch (c) run (d) steal (e) possess		)
T	48.	One-fifth is to one-ninth as 45 is to ?	(	5
	49.	Indicate the word that does not belong. (a) eat (b( feat (c) easy (d) erect (e) emulate (f) even	(	
	50 <b>。</b>	One-seventh is to one-ninth as 63 is to ?	3 <b>(</b> -	)
	51.	Indicate the word that does not belong		
		(a) wasce (b) pasce (c) wet (d) wage (e) win (f) war	(	
	52.	One-fifth is to one-sixth as 24 is to ?	Č.	)
	53.	If the first of January is a Friday, what day must the last day of		
		the month be ?	. (	)
	54.	One- half is to one-seventh as 28 is to ?	(	)
	55.	What number comes next in the following series ? 3, 9, 8, 6, 13	(	, N

IF YOU HAVE ANY TIME LEFT GO BACK AND CHECK YOUR ANSWERS



V